U.S. ENVIRONMENTAL PROTECTION AGENCY — CX 105 - 1-

EPA ASSISTANCE AGREEMENT/AMENDMENT

PART I - ASSISTANCE NOTIFICATION INFORMATION

3. DATE OF AWARD — 4. MAILING DATE

5. AGREEMENT TYPE
Cooperative Agreement
Grant Agreement
Assistance Amendment

5. PAYMENT METHOD
☐ Advance ☐ Reimbursement ☒ Letter of Credit 68-13-0502
Send Payment Request To: Hand a Management Center, Las Vegas

7. TYPE OF ACTION
New

RECIPIENT ORGANIZATION

8. RECIPIENT
Minnesota State Pollution Control Agency
Division of Solid & Hazardous Waste
1935 West County Rd. B-2
Roseville, Minnesota 55113

9. PAYEE
Minnesota State Pollution Control Agency
Division of Solid & Hazardous Waste
1935 West County Rd. B-2
Roseville, Minnesota 55113

EIN NO. 41-0945060
CONGRESSIONAL DISTRICT 4th

10. RECIPIENT TYPE
State

11. PROJECT MANAGER AND TELEPHONE NO.
Michael Hansel, Chemical Engineer
Division of Solid Waste, MPCA
1935 West County Rd. B-2
Roseville, MN 55113 (612) 297-3353

12. CONSULTANT *(WWT Construction Grants Only)*
OSWER/HQ

US EPA RECORDS CENTER REGION 5
514563

EPA CONTACT

13. ISSUING OFFICE *(City/State)*
Washington, D.C.

14. EPA PROJECT/STATE OFFICER AND TELEPHONE NO.
Paul Bitter, Project Officer
U.S. EPA, Region 5, (5HR-TUB)
111 West Jackson Blvd.
Chicago, Il 60604
(312) 886-3007

15. EPA CONGRESSIONAL LIAISON & TEL. NO.
Pat Gaskins (202) 382-5184

16. STATE APPL ID *(Clearinghouse)*
10681-1

17. FIELD OF SCIENC
99

18. PROJECT STEP *(WWT CG Only)*
N/A

19. STATUTORY AUTHORITY
PL-96-510

20. REGULATORY AUTHORITY
40 CFR 30

21. STEP 2 + 3 & STEP 3 *(WWT Construction Only)* N/A
a. Treatment Level
b. Project Type
c. Treatment Process
d. Sludge Design

22. PROJECT TITLE AND DESCRIPTION "Reilly Tar and Chemical Remedial Project"

Remedial action to reconstruct/abandon wells. Remedial investigation/feasibility study of heavily contaminated soils and ground water gradient control systems.

23. PROJECT LOCATION *(Areas Impacted by Project)*

City/Place	County	State	Congressional District
St. Louis Park	Hennepin	MN	10th

24. ASSISTANCE PROGRAM *(CFDA Program No. & Title)*
Superfund

25. PROJECT PERIOD
12/20/82 - 12/19/83

26. BUDGET PERIOD
12/20/82 - 12/19/83

27. COMMUNITY POPULATION *(WWT CG Only)*
N/A

28. TOTAL BUDGET PERIOD COST
$1,993,287

29. TOTAL PROJECT PERIOD COST
$1,993,287

FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
30. EPA Amount This Action		1 993 287	
31. EPA In-Kind Amount		-0-	
32. Unexpended Prior Year Balance		-0-	
33. Other Federal Funds		-0-	
34. Recipient Contribution		-0-	
35. State Contribution		-0-	
36. Local Contribution		-0-	
37. Other Contribution		-0-	
38. Allowable Project Cost		1 993 287	

Program Element	FY	Appropriation	Doc. Control No.	Account Number	Object Class	Obligation/Deoblig. Amount
TFAY9A	83	68/20X814	E2B024	TFA725W06	41.83	$ 919,703
TFAY9A	83	68/20X814	E2B024	TFA725M06	41.83	$1,073,584

EPA Form 5700-20A (Rev. 5-82) Replaces previous editions and EPA Forms 5700-1A, B, C, and D, all of which are obsolete.

Sandra Wilmore, PHONE: 382-5286

(Non-construction)

	BUDGET PERIOD COST
1. PERSONNEL	$ 175 161
2. FRINGE BENEFITS	31 529
3. TRAVEL	7 700
4. EQUIPMENT	
5. SUPPLIES	12 312
6. CONTRACTUAL	1 616 600
7. CONSTRUCTION	-0-
8. OTHER	-0-
9. TOTAL DIRECT CHARGES	1 891 802
10. INDIRECT COSTS: RATE 49.1 % BASE SW&F	
11. TOTAL (Share: Recipient 0 %. Federal 100 %)	$1,993,287
12. TOTAL APPROVED ASSISTANCE AMOUNT	$ 1,993,287

TABLE B - PROGRAM ELEMENT CLASSIFICATION
(Non-construction)

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12. TOTAL (Share: Recipient ____ %. Federal ____ %)	
13. TOTAL APPROVED ASSISTANCE AMOUNT	$

TABLE C - PROGRAM ELEMENT CLASSIFICATION
(Construction)

1. ADMINISTRATION EXPENSE	
2. PRELIMINARY EXPENSE	
3. LAND STRUCTURES, RIGHT-OF-WAY	
4. ARCHITECTURAL ENGINEERING BASIC FEES	
5. OTHER ARCHITECTURAL ENGINEERING FEES	
6. PROJECT INSPECTION FEES	
7. LAND DEVELOPMENT	
8. RELOCATION EXPENSES	
9. RELOCATION PAYMENTS TO INDIVIDUALS AND BUSINESSES	
10. DEMOLITION AND REMOVAL	
11. CONSTRUCTION AND PROJECT IMPROVEMENT	
12. EQUIPMENT	
13. MISCELLANEOUS	
14. TOTAL (Lines 1 thru 13)	
15. ESTIMATED INCOME (If applicable)	
16. NET PROJECT AMOUNT (Line 14 minus 15)	
17. LESS: INELIGIBLE EXCLUSIONS	
18. ADD: CONTINGENCIES	
19. TOTAL (Share: Recipient ____ %. Federal ____ %)	
20. TOTAL APPROVED ASSISTANCE AMOUNT	$

a. GENERAL CONDITIONS

The recipient covenants and agrees that it will expeditiously initiate and timely complete the project work for which assistance has been awarded under this agreement, in accordance with all applicable provisions of 40 CFR Chapter I, Subpart B. The recipient warrants, represents, and agrees that it, and its contractors, subcontractors, employees and representatives, will comply with: (1) all applicable provisions of 40 CFR Chapter I, Subchapter B, INCLUDING BUT NOT LIMITED TO the provisions of Appendix A to 40 CFR Part 30, and (2) any special conditions set forth in this assistance agreement or any assistance amendment pursuant to 40 CFR 30.425.

b. SPECIAL CONDITIONS:

(For cooperative agreements include identification or summarization of EPA responsibilities that reflect or contribute to substantial involvement.)

1. EPA awards this cooperative agreement in accordance with the Federal Grant and Cooperative Agreement Act of 1977. This agreement is subject to all applicable EPA assistance regulations.

2. CERCLA section 104(c)(4) requires that CERCLA funded actions provide a cost-effective response which provides a balance between the need for protection of public health, welfare and the environment, and the availability of amounts from the Fund to respond to other sites. If the State requests CERCLA funding for subsequent remedial planning and implementation, EPA will evaluate the request against availability of Fund monies, and determine the appropriate funding. Nothing in this Cooperative Agreement or in the State's application for assistance commits EPA to future funding for response actions at the site.

3. The State agrees to provide as part of the investigatory efforts, the data that are necessary to determine the duration and residual levels of chemicals to which the affected population will be exposed as a result of each proposed remedial alternative.

4. Delete State assurance number 2, page 47 on the State application in its entirety and insert the following:

   A. EPA does not expect that there will be any operation and maintenance (O&M) associated with the wells that will be reconstructed or installed as part of operable unit 1. However, in the event that such O&M proves necessary, the State assures that it will provide O&M. Furthermore, the State assures that if use of any of these wells is discontinued, these wells will be properly closed.

   B. If this agreement is amended to provide for additional remedial design and implementation of soil and ground water remedies, then the application for amendment will include a plan for the State's O&M of the remedial action. This plan will identify the agency responsible for O&M, the sources of funds for such O&M, and a description of the State's legal and financial capability for providing necessary O&M of the site after remedial implementation.

b. SPECIAL CONDITIONS *(Continued)*

PART IV

NOTE: The Agreement must be completed in duplicate and the Original returned to the Grants Administration Division for Headquarters awards and to the appropriate Grants Administrations Office for State and local awards within 3 calendar weeks after receipt or within any extension of time as may be granted by EPA.

Receipt of a written refusal or failure to return the properly executed document within the prescribed time, may result in the withdrawal of the offer by the Agency. Any change to the Agreement by the recipient subsequent to the document being signed by the EPA Award Official which the Award Official determines to materially alter the Agreement shall void the Agreement.

OFFER AND ACCEPTANCE

The United States of America, acting by and through the U.S. Environmental Protection Agency (EPA), hereby offers assistance/amendment to the Minnesota State Pollution Control Agency (RECIPIENT ORGANIZATION) for 100 % of all approved costs incurred up to and not exceeding $ 1,993,287 (ASSISTANCE AMOUNT) for the support of approved budget period effort described in application *(including all application modifications)* "Reilly Tar and Chemical Remedial Project" 8/11/82 (DATE AND TITLE) included herein by reference.

ISSUING OFFICE *(Grants Administration Office)*	AWARD APPROVAL OFFICE
ORGANIZATION/ADDRESS Grants Administration Division Environmental Protection Agency Washington, D.C. 20460	ORGANIZATION/ADDRESS Office of Solid Waste and Emergency Response Environmental Protection Agency Washington, D.C. 20460

THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY

SIGNATURE OF AWARD OFFICIAL	TYPED NAME AND TITLE	DATE
Frederick L. Meadows	Frederick L. Meadows Chief, Grants Operations Branch (PM-216)	DEC 21 1982

This Agreement is subject to applicable U.S. Environmental Protection Agency statutory provisions and assistance regulations. In accepting this award or amendment and any payments made pursuant thereto, (1) the undersigned represents that he is duly authorized to act on behalf of the recipient organization, and (2, the recipient agrees (a) that the award is subject to the applicable provisions of 40 CFR Chapter I, Subchapter B and of the provisions of this agreement (Parts I thru IV), and (b) that acceptance of any payments constitutes an agreement by the payee that the amounts, if any found by EPA to have been overpaid will be refunded or credited in full to EPA.

BY AND ON BEHALF OF THE DESIGNATED RECIPIENT ORGANIZATION

SIGNATURE	TYPED NAME AND TITLE	DATE
Louis J. Breimhurst	Louis J. Breimhurst, Ex Director	12/30/82

REILLY TAR AND CHEMICAL COMPANY
SUPERFUND SPECIAL CONDITIONS

1. CERCLA section 104(c)(4) requires that CERCLA funded actions provide a cost-effective response which provides a balance between the need for protection of public health, welfare and the environment, and the availability of amounts from the Fund to respond to other sites. If the State requests CERCLA funding for subsequent remedial planning and implementation, EPA will evaluate the request against availability of Fund monies, and determine the appropriate funding. Nothing in this Cooperative Agreement or in the State's application for assistance commits EPA to future funding for response actions at the site.

2. The State agrees to provide as part of the investigatory efforts, the data that are necessary to determine the duration and residual levels of chemicals to which the affected population will be exposed as a result of the proposed remedial alternative.

3. Delete State assurance number 2, page 47 on the State application in its entirety and insert the following:

   a. EPA does not expect that there will be any operation and maintenance (O&M) associated with the wells that will be reconstructed or installed as part of operable unit 1. However, in the event that such O&M proves necessary, the State assures that it will provide O&M. Furthermore, the State assures that if use of any of these wells is discontinued, these wells will be properly closed.

   b. If this agreement is amended to provide for additional remedial design and implementation of soil and ground water remedies, then the application for amendment will include a plan for the State's O&M of the remedial action. This plan will identify the agency responsible for O&M, the sources of funds for such O&M, and a description of the State's legal and financial capability for providing necessary O&M of the site after remedial implementation.

STATE AND LOCAL NONCONSTRUCTION PROGRAMS

OMB Approval No. 80-R0180

FEDERAL ASSISTANCE

2. APPLICANT'S APPLICATION — a. NUMBER: | b. DATE Year month day: 1982 8 11

3. STATE APPLICATION IDENTIFIER — a. NUMBER: | b. DATE ASSIGNED Year month day: 19

1. TYPE OF ACTION (Mark appropriate box)
- ☐ PREAPPLICATION
- ☒ APPLICATION
- ☐ NOTIFICATION OF INTENT (Opt.)
- ☐ REPORT OF FEDERAL ACTION

Leave Blank

SECTION I—APPLICANT/RECIPIENT DATA

4. LEGAL APPLICANT/RECIPIENT
- a. Applicant Name: MN Pollution Control Agency
- b. Organization Unit: Division of Solid & Hazardous Waste
- c. Street/P.O. Box: 1934 West County Road B-2
- d. City: Roseville
- e. County: Ramsey
- f. State: Minnesota
- g. ZIP Code: 55113
- h. Contact Person (Name & telephone No.): Michael J. Hansel 612/297-3353

5. FEDERAL EMPLOYER IDENTIFICATION NO.: 41-0945060

6. PROGRAM: PL 96-510 (From Federal Catalog)
- a. NUMBER: 96-510
- b. TITLE: PL 96-510 CERCLA (Superfund)

7. TITLE AND DESCRIPTION OF APPLICANT'S PROJECT: Remedial Planning and Implementation Work at Reilly Tar and Chemical Company - St. Louis Park, Minnesota. Abandonment of multi-aquifer wells, testing of gradient control system, compilation of data, investigation of isolation of source materials.

8. TYPE OF APPLICANT/RECIPIENT (A—State; B—Interstate; C—Substate District; D—County; E—City; F—School District; G—Special Purpose District; H—Community Action Agency; I—Higher Educational Institution; J—Indian Tribe; K—Other (Specify):) Enter appropriate letter: A

9. TYPE OF ASSISTANCE (A—Basic Grant; B—Supplemental Grant; C—Loan; D—Insurance; E—Other) Enter appropriate letter(s): B

10. AREA OF PROJECT IMPACT (Names of cities, counties, States, etc.): Hennepin County Cities of St. Louis Park, Hopkins, Edina

11. ESTIMATED NUMBER OF PERSONS BENEFITING: 106,357

12. TYPE OF APPLICATION (A—New; B—Renewal; C—Revision; D—Continuation; E—Augmentation) Enter appropriate letter: A

13. PROPOSED FUNDING

a. FEDERAL	$ 1,993,287 .00
b. APPLICANT	* .00
c. STATE	— .00
d. LOCAL	— .00
e. OTHER	— .00
f. TOTAL	$ 1,993,287 .00

14. CONGRESSIONAL DISTRICTS OF:
- a. APPLICANT:
- b. PROJECT: Sec. 10

15. TYPE OF CHANGE (For 12 c or 12 e) (A—Increase Dollars; B—Decrease Dollars; C—Increase Duration; D—Decrease Duration; E—Cancellation; F—Other (Specify):) N/A
Enter appropriate letter(s):

16. PROJECT START DATE Year month day: 19 82 9 1

17. PROJECT DURATION: 12 Months

18. ESTIMATED DATE TO BE SUBMITTED TO FEDERAL AGENCY ▶ Year month day: 19 82 7 27

19. EXISTING FEDERAL IDENTIFICATION NUMBER:

20. FEDERAL AGENCY TO RECEIVE REQUEST (Name, City, State, ZIP code): U.S. Environmental Protection Agency, Region V, Chicago, IL 60604

21. REMARKS ADDED: ☐ Yes ☒ No

SECTION II—CERTIFICATION

22. THE APPLICANT CERTIFIES THAT ▶
a. To the best of my knowledge and belief, data in this preapplication/application are true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved.

b. If required by OMB Circular A-95 this application was submitted, pursuant to instructions therein, to appropriate clearinghouses and all responses are attached:

	No response	Response attached
(1)	☐	☐
(2)	☐	☐
(3)	☐	☐

23. CERTIFYING REPRESENTATIVE
a. TYPED NAME AND TITLE: Louis J. Breimhurst, Executive Director
b. SIGNATURE: Louis J. Breimhurst
c. DATE SIGNED Year month day: 19 82-8-11

SECTION III—FEDERAL AGENCY ACTION

24. AGENCY NAME

25. APPLICATION RECEIVED Year month day: 19

26. ORGANIZATIONAL UNIT

27. ADMINISTRATIVE OFFICE

28. FEDERAL APPLICATION IDENTIFICATION

29. ADDRESS

30. FEDERAL GRANT IDENTIFICATION

31. ACTION TAKEN
- ☐ a. AWARDED
- ☐ b. REJECTED
- ☐ c. RETURNED FOR AMENDMENT
- ☐ d. DEFERRED
- ☐ e. WITHDRAWN

32. FUNDING

a. FEDERAL	$ .00
b. APPLICANT	.00
c. STATE	.00
d. LOCAL	.00
e. OTHER	.00
f. TOTAL	$ .00

33. ACTION DATE ▶ Year month day: 19

34. STARTING DATE Year month day: 19

35. CONTACT FOR ADDITIONAL INFORMATION (Name and telephone number)

36. ENDING DATE Year month day: 19

37. REMARKS ADDED: ☐ Yes ☐ No

38. FEDERAL AGENCY A-95 ACTION
a. In taking above action, any comments received from clearinghouses were considered. If agency response is due under provisions of Part 1, OMB Circular A-95, it has been or is being made.

b. FEDERAL AGENCY A-95 OFFICIAL (Name and telephone no.)

424-102

STANDARD FORM 424 PAGE 1 (Rev 4-77) Prescribed by OMB Circular A-102

*State share to be provided by credit for funds previously expended as provided in CERCLA, Section 104.c. See Attachment B.

SECTION IV—REMARKS *(Please reference the proper item number from Sections I, II or III, if applicable)*

None

GENERAL INSTRUCTIONS

This is a multi-purpose standard form. First, it will be used by applicants as a required facesheet for pre-applications and applications submitted in accordance with OMB Circular A-102. Second, it will be used by Federal agencies to report to clearinghouses on major actions taken on applications reviewed by clearinghouses in accordance with OMB Circular A-95. Third, it will be used by Federal agencies to notify States of grants-in-aid awarded in accordance with Treasury Circular 1082. Fourth, it may be used, on an optional basis, as a notification of intent from applicants to clearinghouses, as an early initial notice that Federal assistance is to be applied for (clearinghouse procedures will govern).

APPLICANT PROCEDURES FOR SECTION I

Applicant will complete all items in Section I. If an item is not applicable, write "NA." If additional space is needed, insert an astensk "*" and use the remarks section on the back of the form. An explanation follows for each item:

Item

1 Mark appropriate box. Pre-application and application guidance is in OMB Circular A-102 and Federal agency program instructions. Notification of intent guidance is in Circular A-95 and procedures from clearinghouse. Applicant will not use "Report of Federal Action" box.

2a Applicant's own control number, if desired.

2b Date Section I is prepared.

3a Number assigned by State clearinghouse, or if delegated by State, by areawide clearinghouse. All requests to Federal agencies *must* contain this identifier if the program is covered by Circular A-95 and required by applicable State/areawide clearinghouse procedures. If in doubt, consult your clearinghouse.

3b Date applicant notified of clearinghouse identifier.

4a-4h. Legal name of applicant/recipient, name of primary organizational unit which will undertake the assistance activity, complete address of applicant, and name and telephone number of person who can provide further information about this request.

5 Employer identification number of applicant as assigned by Internal Revenue Service.

6a. Use Catalog of Federal Domestic Assistance number assigned to program under which assistance is requested. If more than one program (e.g., joint-funding) write "multiple" and explain in remarks. If unknown, cite Public Law or U.S. Code.

6b. Program title from Federal Catalog. Abbreviate if necessary.

7 Brief title and appropriate description of project. For notification of intent, continue in remarks section if necessary to convey proper description.

8. Mostly self-explanatory. "City" includes town, township or other municipality.

9. Check the type(s) of assistance requested. The definitions of the terms are:

A. Basic Grant. An original request for Federal funds. This would not include any contribution provided under a supplemental grant.

B. Supplemental Grant. A request to increase a basic grant in certain cases where the eligible applicant cannot supply the required matching share of the basic Federal program (e.g., grants awarded by the Appalachian Regional Commission to provide the applicant a matching share).

C. Loan. Self explanatory.

D. Insurance. Self explanatory.

E. Other. Explain on remarks page.

Item

10 Governmental unit where significant and meaningful impact could be observed. List only largest unit or units affected, such as State, county, or city. If entire unit affected, list it rather than subunits.

11 Estimated number of persons directly benefiting from project.

12 Use appropriate code letter. Definitions are:

A. New. A submittal for the first time for a new project.

B. Renewal. An extension for an additional funding/budget period for a project having no projected completion date, but for which Federal support must be renewed each year.

C. Revision. A modification to project nature or scope which may result in funding change (increase or decrease).

D. Continuation. An extension for an additional funding/budget period for a project the agency initially agreed to fund for a definite number of years.

E. Augmentation. A requirement for additional funds for a project previously awarded funds in the same funding/budget period. Project nature and scope unchanged.

13 Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions will be included. If the action is a change in dollar amount of an existing grant (a revision or augmentation), indicate only the amount of the change. For decreases enclose the amount in parentheses. If both basic and supplemental amounts are included, break out in remarks. For multiple program funding, use totals and show program breakouts in remarks. Item definitions: 13a, amount requested from Federal Government; 13b, amount applicant will contribute; 13c, amount from State, if applicant is not a State; 13d, amount from local government, if applicant is not a local government; 13e, amount from any other sources, explain in remarks.

14a Self explanatory.

14b. The district(s) where most of actual work will be accomplished. If city-wide or State-wide, covering several districts, write "city-wide" or "State-wide."

15. Complete only for revisions (item 12c), or augmentations (item 12e).

16 Approximate date project expected to begin (usually associated with estimated date of availability of funding).

17. Estimated number of months to complete project after Federal funds are available.

18 Estimated date pre-application/application will be submitted to Federal agency if this project requires clearinghouse review. If review not required, this date would usually be same as date in item 2b.

PART II

PROJECT APPROVAL INFORMATION

Item 1.
Does this assistance request State, local, regional, or other priority rating?

Name of Governing Body _____
Priority Rating _____

_____ Yes __X__ No

Item 2.
Does this assistance request require State, or local advisory, educational or health clearances?

Name of Agency or Board _____

_____ Yes __X__ No *(Attach Documentation)*

Item 3.
Does this assistance request require clearinghouse review in accordance with OMB Circular A-95?

(Attach Comments)

__X__ Yes _____ No

Item 4.
Does this assistance request require State, local, regional or other planning approval?

Name of Approving Agency Dept. of Energy, Planning and Development
Date _____

__X__ Yes _____ No

Item 5.
Is the proposed project covered by an approved comprehensive plan?

Check one: State ☐
Local ☐
Regional ☐

_____ Yes __X__ No Location of Plan _____

Item 6.
Will the assistance requested serve a Federal installation?

Name of Federal Installation _____
Federal Population benefiting from Project _____

_____ Yes __X__ No

Item 7.
Will the assistance requested be on Federal land or installation?

Name of Federal Installation _____
Location of Federal Land _____
Percent of Project _____

_____ Yes __X__ No

Item 8.
Will the assistance requested have an impact or effect on the environment?

See instructions for additional information to be provided.
This is a planning effort with no construction. Should construction later be funded, it would improve the environment by removing contaminant from soil and ground water.

_____ Yes __X__ No

Item 9.
Has the project for which assistance is requested caused, since January 1, 1971, or will it cause, the displacement of any individual, family, business, or farm?

Number of:
Individuals _____
Families _____
Businesses _____
Farms _____

_____ Yes __X__ No

Item 10.
Is there other related assistance on this project previous, pending, or anticipated?

See instructions for additional information to be provided.
See attached.

__X__ Yes _____ No

Item 11.
Is project in a Designated Flood Hazard Area?

_____ Yes __X__ No

Part II

Project Approval Information

Previous Assistance:

Item 10.

Special Purpose Grant, Public Law 93-510, Solid Waste Disposal Act, as amended, "Preparation for Remedial Action in St. Louis Park," Assistance Iden. No. CX809642010, originally granted July 22, 1981, amended August 14, 1981, September 25, 1981, May 15, 1982. Funds obligated, work in progress.

Anticipated Assistance:

Potential CERCLA (Superfund) implementation of project.

INSTRUCTIONS

PART II

Negative answers will not require an explanation unless the Federal agency requests more information at a later date. Provide supplementary data for all "Yes" answers in the space provided in accordance with the following instructions:

Item 1—Provide the name of the governing body establishing the priority system and the priority rating assigned to this project.

Item 2—Provide the name of the agency or board which issued the clearance and attach the documentation of status or approval.

Item 3—Attach the clearinghouse comments for the application in accordance with the instructions contained in Office of Management and Budget Circular No. A-95. If comments were submitted previously with a preapplication, do not submit them again but any additional comments received from the clearinghouse should be submitted with this application.

Item 4—Furnish the name of the approving agency and the approval date.

Item 5—Show whether the approved comprehensive plan is State, local or regional, or if none of these; explain the scope of the plan. Give the location where the approved plan is available for examination and state whether this project is in conformance with the plan.

Item 6—Show the population residing or working on the Federal installation who will benefit from this project.

Item 7—Show the percentage of the project work that will be conducted on federally-owned or leased land. Give the name of the Federal installation and its location.

Item 8—Describe briefly the possible beneficial and harmful impact on the environment of the proposed project. If an adverse environmental impact is anticipated, explain what action will be taken to minimize the impact. Federal agencies will provide separate instructions if additional data are needed.

Item 9—State the number of individuals, families, businesses, or farms this project will displace. Federal agencies will provide separate instructions if additional data are needed.

Item 10—Show the Federal Domestic Assistance Catalog number, the program name, the type of assistance, the status and the amount of each project where there is related previous, pending or anticipated assistance. Use additional sheets, if needed.

Item 11—Flood Insurance—Check "Yes" if project or any nonexpendable property is to be located in a special flood hazard area designated by the Department of Housing and Urban Development. If the answer is "Yes" the grantee must purchase the required flood insurance if required pursuant to Item 7 of the General Instructions to this application.

PART III–BUDGET INFORMATION

SECTION A–BUDGET SUMMARY

GRANT PROGRAM, FUNCTION OR ACTIVITY (a)	FEDERAL CATALOG NO. (b)	ESTIMATED UNOBLIGATED FUNDS		NEW OR REVISED BUDGET		
		FEDERAL (c)	NON-FEDERAL (d)	FEDERAL (e)	NON-FEDERAL (f)	TOTAL (g)
1. CERCLA (Superfund)	PL 96-510	$	$	$ 1,993,287	$	$ 1,993,287
2.						
3.						
4.						
5. TOTALS		$	$	$ 1,993,287	$	$ 1,993,287

SECTION B–SCHEDULE A BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				TOTAL (5)
	(1) CERCLA	(2)	(3)	(4)	
a. Personnel	$ 175,161	$	$	$	$ 175,161
b. Fringe Benefits	31,529				31,529
c. Travel	7,700				7,700
d. Equipment	48,500				48,500
e. Supplies	12,312				12,312
f. Contractual	1,616,600				1,616,600
g. Construction					
h. Other					
i. Total Direct Charges	1,891,802				1,891,802
j. Indirect Charges	101,485				101,485
k. TOTALS	$ 1,993,287	$	$	$	$ 1,993,287
7. Program Income	$ None	$	$	$	$ None

*Stat funds to be provided by credit for funds previously expended as provided in CERCLA,

Form Approved
OMB No. 155-R0110

SECTION B – SCHEDULE B – BUDGET CATEGORIES

6. Program Elements	FUNDING			(4) MAN-YEARS
	(1) FEDERAL	(2) NON-FEDERAL	(3) TOTAL	
a. Well Abandonment (task 1.a.)	$ 900,000	$ *	$ 900,000	
b. Source Materials Study (tasks 5.a., c.)	496,000	*	496,000	
c. Test Gradient Control System (tasks 2.c., d.)	275,000	*	275,000	
d. Administrative Tasks (task 6.a.)	322,287	*	322,287	
e.				
f.				
g.				
h.				
i. Total Program Elements	$ 1,993,287	$ *	$ 1,993,287	
j. STATE TOTAL	$ *	$ L	$ *	

*State funds to be provided by credit for funds previously expended as provided in CERCLA, Section 104.c. See Attachment B.

SECTION C–NON FEDERAL RESOURCES

(a) GRANT PROGRAM	(b) APPLICANT	(c) STATE	(d) OTHER SOURCES	(e) TOTALS
8.	$	$	$	$
9.				
10.				
11.				
12. TOTALS	$	$	$	$

SECTION D–FORECASTED CASH NEEDS

	TOTAL FOR 1st YEAR	1st QUARTER	2nd QUARTER	3rd QUARTER	4th QUARTER
13. Federal	$ 1,993,287	$ 498,322	$ 498,322	$ 498,322	$ 498,321
14. Non-Federal	*	*	*	*	*
15. TOTALS	$ 1,993,287	$ 498,322	$ 498,322	$ 498,322	$ 498,321

SECTION E–BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) GRANT PROGRAM	FUTURE FUNDING PERIODS (YEARS)			
	(b) FIRST	(c) SECOND	(d) THIRD	(e) FOURTH
16.	$	$	$	$
17.				
18.				
19.				
20. TOTALS	$	$	$	$

SECTION F–OTHER BUDGET INFORMATION

(Attach Additional Sheets If Necessary)

21. Direct Charges: See attachment, Section X, page 36.

22. Indirect Charges: The provisional rate is 49.1 percent, and the base is personnel costs and fringe benefits. Total indirect charges equals 0.491 X $206.690 = $101,485.00.

23. Remarks: See attachment

*State share to be provided by credit for funds previously expended as provided in CERCLA, Section 104.c. See Attachment B.

PART IV–PROGRAM NARRATIVE *(Attach per instruction)*

INSTRUCTIONS

PART III

General Instructions

This form is designed so that application can be made for funds from one or more grant programs. In preparing the budget, adhere to any existing Federal grantor agency guidelines which prescribe how and whether budgeted amounts should be separately shown for different functions or activities within the program. For some programs, grantor agencies may require budgets to be separately shown by function or activity. For other programs, grantor agencies may not require a breakdown by function or activity. Sections A, B, C, and D should include budget estimates for the whole project except when applying for assistance which requires Federal authorization in annual or other funding period increments. In the latter case, Sections A, B, C, and D should provide the budget for the first budget period *(usually a year)* and Section E should present the need for Federal assistance in the subsequent budget periods. All applications should contain a breakdown by the object class categories shown in Lines a-k of Section B.

Section A. Budget Summary
Lines 1-4, Columns (a) and (b).

For applications pertaining to a *single* Federal grant program *(Federal Domestic Assistance Catalog number)* and *not requiring* a functional or activity breakdown, enter on Line 1 under Column (a) the catalog program title and the catalog number in Column (b).

For applications pertaining to a *single* program *requiring* budget amounts by multiple functions or activities, enter the name of each activity or function on each line in Column (a), and enter the catalog number in Column (b). For applications pertaining to *multiple* programs where *none* of the programs *require* a breakdown by function or activity, enter the catalog program title on each line in Column (a) and the respective catalog number on each line in Column (b).

For applications pertaining to *multiple* programs where one or more programs *require* a breakdown by function or activity, prepare a separate sheet for each program requiring the breakdown. Additional sheets should be used when one form does not provide adequate space for all breakdown of data required. However, when more than one sheet is used, the first page should provide the summary totals by programs.

Lines 1-4, Columns (c) through (g).

For new applications, leave Columns (c) and (d) blank. For each line entry in Columns (a) and (b), enter in Columns (e), (f), and (g) the appropriate amounts of funds needed to support the project for the first funding period (usually a year).

For continuing grant program applications, submit these forms before the end of each funding period as required by the grantor agency. Enter in Columns (c) and (d) the estimated amounts of funds which will remain unobligated at the end of the grant funding period only if the Federal grantor agency instructions provide for this. Otherwise, leave these columns blank. Enter in Columns (e) and (f) the amounts of funds needed for the upcoming period. The amount(s) in Column (g) should be the sum of amounts in Columns (e) and (f).

For supplemental grants and changes to existing grants, do not use Columns (c) and (d). Enter in Column (e) the amount of the increase or decrease of Federal funds and enter in Column (f) the amount of the increase or decrease of non-Federal funds. In Column (g) enter the new total budgeted amount (Federal and non-Federal) which includes the total previous authorized budgeted amounts plus or minus, as appropriate, the amounts shown in Columns (e) and (f). The amount(s) in Column (g) should *not* equal the sum of amounts in Columns (e) and (f).

Line 5—Show the totals for all columns used.

Section B. Schedule A—Budget Categories

In the column headings (1) through (4), enter the titles of the same programs, functions, and activities shown on Lines 1-4, Column (a), Section A. When additional sheets were prepared for Section A, provide similar column headings on each sheet. For each program, function or activity, fill in the total requirements for funds (both Federal and non-Federal) by object class categories.

Lines 6a-h—Show the estimated amount for each direct cost budget *(object class)* category for each column with program, function or activity heading.

Line 6i—Show the totals of Lines 6a to 6h in each column.

Line 6j—Show the amount of indirect cost. Refer to Office of Management and Budget Circular No. A-87.

Line 6k—Enter the total of amounts of Lines 6i and 6j. For all applications for new grants and continuation grants the total amount in Column (5), Line 6k, should be the same as the total amount shown in Section A, Column (g), Line 5. For supplemental grants and changes to grants, the total amount of the increase or decrease as shown in Columns (1)-(4), Line 6k should be the same as the sum of the amounts in Section A, Columns (e) and (f) on Line 5. When additional sheets were prepared, the last two sentences apply only to the first page with summary totals.

Line 7—Enter the estimated amount of income, if any, expected to be generated from this project. Do not add or subtract this amount from the total project amount. Show under the program narrative statement the nature and source of income. The estimated amount of program income may be considered by the Federal grantor agency in determining the total amount of the grant.

Form Approved
OMB No. 158-R0110

INSTRUCTIONS

PART III
(Continued)

Section B. Schedule B—Budget Categories

Lines 6a-h—For each program element fill in the total requirements for funds *(Federal, non-Federal, and total)* and manyears.

Line i—Show the totals of Lines 6a through h in each column.

Line j—Show the State totals. Total *(Program Elements)* and State total might not be equal due to expenses which are not classified under specific program elements.

Section C. Source of Non-Federal Resources

Lines 8-11—Enter amounts of non-Federal resources that will be used on the grant. If in-kind contributions are included, provide a brief explanation on a separate sheet. (See Attachment F, FMC 74-7.)

Column (a)—Enter the program titles identical to Column (a), Section A. A breakdown by function or activity is not necessary.

Column (b)—Enter the amount of cash and in-kind contributions to be made by the applicant as shown in Section A. (See also Attachment F, FMC 74-7.)

Column (c)—Enter the State contribution if the applicant is *not* a State or State agency. Applicants which are a State or State agencies should leave this column blank.

Column (d)—Enter the amount of cash and in-kind contributions to be made from all other sources.

Column (e)—Enter totals of Columns (b), (c), and (d).

Line 12—Enter the total for each of Columns (b)-(e). The amount in Column (e) should be equal to the amount on Line 5, Column (f), Section A.

Section D. Forecasted Cash Needs

Line 13—Enter the amount of cash needed by quarter from the grantor agency during the first year.

Line 14—Enter the amount of cash from all other sources needed by quarter during the first year.

Line 15—Enter the totals of amounts on Lines 13 and 14.

Section E. Budget Estimates of Federal Funds Needed for Balance of the Project

Lines 16-19—Enter in Column (a) the same grant program titles shown in Column (a), Section A. A breakdown by function or activity is not necessary. For new applications and continuing grant applications, enter in the proper columns amounts of Federal funds which will be needed to complete the program or project over the succeeding funding periods *(usually in years)*. This Section need not be completed for amendments, changes or supplements to funds for the current year of existing grants.

If more than four lines are needed to list the program titles submit additional schedules as necessary.

Line 20—Enter the total for each of the Columns (b)-(e). When additional schedules are prepared for this Section, annotate accordingly and show the overall totals on this line.

Section F. Other Budget Information

Line 21—Use this space to explain amounts for individual direct object cost categories that may appear to be out of the ordinary or to explain the details as required by the Federal grantor agency.

Line 22—Enter the type of indirect rate *(provisional, predetermined, final or fixed)* that will be in effect during the funding period, the estimated amount of the base to which the rate is applied, and the total indirect expense.

Line 23—Provide any other explanations required herein or any other comments deemed necessary.

PART V
ASSURANCES

The Applicant hereby agrees and certifies that he will comply with the regulations, policies, guidelines, and requirements including OMB Circular No. A-95, A-102 and FMC 74-4, as they relate to the application, acceptance and use of Federal funds for this Federally assisted project. Also the Applicant agrees and certifies with respect to the grant that:

1. It possesses legal authority to apply for the grant; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body, authorizing the filing of the application, including all understandings and assurances contained therein; and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

2. It will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352) and in accordance with Title VI of that Act, no person in the United States shall, on the ground of race, color, or nation origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the applicant receives Federal financial assistance and will immediately take any measures necessary to effectuate this agreement.

3. It will comply with Title VI of the Civil Rights Act of 1964 (42 USC 2000d) prohibiting employment discrimination where (1) the primary source of a grant is to provide employment or (2) discriminatory employment practices will result in unequal treatment of persons who are or should be benefiting from the grant-aided activity.

4. It will comply with requirements of the provisions of the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (P.L. 91-646) which provides for fair and equitable treatment of persons displaced as a result of Federal and federally assisted programs.

5. It will comply with the provisions of the Hatch Act which limit the political activity of employees.

6. It will comply with the minimum wage and maximum hours provisions of the Federal Fair Labor Standards Act, as they apply to employees of institutions of higher education, hospitals, other non-profit organizations, and to employees of State and local governments who are not employed in integral operations in areas of traditional governmental functions.

7. It will establish safeguards to prohibit employees from using their positions for a purpose that is or gives the appearance of being motivated by a desire for private gain for themselves or others, particularly those with whom they have family, business, or other ties.

8. It will give the grantor agency and the Comptroller General through any authorized representative the access to and the right to examine all records, books, papers, or documents related to the grant.

9. It will comply with all requirements imposed by the Federal grantor agency concerning special requirements of law, program requirements, and other administrative requirements.

10. It will insure that the facilities under its ownership, lease or supervision which shall be utilized in the accomplishment of the project are not listed on the Environmental Protection Agency's (EPA) list of Violating Facilities and that it will notify the Federal grantor agency of the receipt of any communication from the Director of the EPA Office of Federal Activities indicating that a facility to be used in the project is under consideration for listing by the EPA.

11. It will comply with the flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973, Public Law 93-234, 87 Stat. 975, approved December 31, 1976. Section 102(a) requires, on and after March 2, 1975, the purchase of flood insurance in communities where such insurance is available as a condition for the receipt of any Federal financial assistance for construction or acquisition purposes for use in any area that has been identified by the Secretary of the Department of Housing and Urban Development as an area having special flood hazards.

12. It will comply with all applicable requirements of Section 13 of the Clean Water Act Amendments of 1972 (P.L. 92-500), if the grant is awarded under any grant authority of that Act, which provides that no person in the United States shall, on the ground of sex be excluded from participation in, be denied the benefits of, or be otherwise subject to discrimination under any program or activity under the said Clean Water Act Amendments for which the applicant receives financial assistance and will take all necessary measures to effectuate this agreement.

* U.S. GOVERNMENT PRINTING OFFICE: 1979 —620-228/4054

COOPERATIVE AGREEMENT

Reilly Tar/St. Louis Park

Minnesota

Attachment A

Work Statement

Table of Contents

WORK STATEMENT

I. Background:

Between 1918 and 1972 Reilly Tar and Chemical (Reilly) operated a coal tar distillation and wood preserving plant in St. Louis Park. The operation was located on an 80 acre tract near Highway 7 and Louisiana Avenue (see Figure 1). Reilly disposed of wastes from the operation in a network of ditches that discharged to a wetland adjacent to the operation. The primary area of soil and heavy ground water contamination is below the wetland and the southern portion of the former site itself. The wastes consisted of a mixture of many compounds, including a class of organic compounds known as Polynuclear Aromatic Hydrocarbons, or simply PAH. Some PAH compounds are carcinogenic and therefore pose a health risk upon chronic exposure.

In 1932, the first St. Louis Park municipal well was constructed. After several weeks of operation the well was closed down due to complaints of odor. The odor was attributed to the presence of phenol in the water. Attempts to remedy the odor were unsuccessful and the well was abandoned. Well drillers at that time suspected that the Reilly Tar site was the cause of the problem.

Throughout the 1960's and through early 1970's the Minnesota Department of Health (MDH) and St. Louis Park continued to analyze municipal, commercial and industrial wells for phenol. Phenols impart a bad taste to water but are not believed to pose a significant health hazard at low concentrations.

In the mid 1970's the MDH and Minnesota Pollution Control Agency (MPCA) became concerned about PAH compounds which are found in coal tar.

In 1974, the city of St. Louis Park contracted with Gerald Sunde, a consulting engineer to investigate pathways for the movement of contaminants. Sunde concluded that wells open to several aquifers provided a significant route for contaminant spread.

In the spring of 1975 the MPCA contracted with Barr Engineering to conduct a study to assess the extent and magnitude of the contamination. The study concluded that the soil and shallow unconsolidated sandy aquifers were seriously contaminated and were acting as a source of contaminants to deeper bedrock aquifers. The report recommended a gradient control well network be implemented, heavily contaminated soil be removed, and the hydrology of the area be further defined.

In May 1978, the MDH was able to commence very sensitive analyses of water using High Performance Liquid Chromatography. An investigation in St. Louis Park identified PAH present in wells 7, 9, 10 and 15. These wells, located approximately ¼ to ½ mile north of the site, were subsequently closed down in 1978. (See Figure 1) The next well closure occurred in December of 1979 when St. Louis Park municipal well number 4 was closed as a result of increasing levels of PAH. This well is located 1½ miles southeast of the former Reilly site. In February of 1981 Hopkins municipal well number 3 was closed. This well is located 1 mile to the southwest of the former Reilly site. St. Louis Park well 5 was closed in August, 1981 due to increasing levels of PAH compounds. Well 5 is located ½ mile west of the site. To date, six municipal wells have been closed in St. Louis Park and one in Hopkins. In addition, the MDH has since plugged or safely reconstructed over 24 wells in the vicinity of the site.

All of the closed municipal wells draw from a water bearing rock layer between 250 and 510 feet below the land surface. The water bearing rock is known as the Prairie du Chien-Jordan aquifer. The position of the Prairie du Chien-Jordan aquifer relative to other aquifers in the area is identified in an attached geologic profile. (See Figure 2) Approximately 80 percent of the ground water utilized in the Twin Cities is from this aquifer. To date the contamination of the Prairie du Chien-Jordan aquifer has been limited to areas below St. Louis Park and Hopkins.

In July 1978, the MDH contracted with the U.S. Geological Survey (USGS) to better define ground water flow and organic contaminant movement in the bedrock underlying St. Louis Park. Their interpretation of the rate and mechanism for contaminant movement was then used by E. A. Hickok and Associates in 1980 and 1981 when Hickok was contracted by the state to provide the plans needed to implement a gradient control network and a soil removal program. The final report on remedial actions was completed November, 1981.

II. Enforcement Action to Date:

In 1970, the State of Minnesota and the City of St. Louis Park brought an action against Reilly Tar, seeking a permanent injunction from air and water pollution from the site. In turn, Reilly Tar sold the 80 acre site to the city, which still owns part of the site through its Housing and Redevelopment Authority.

On September 3, 1980, the Reilly case was filed under RCRA section 7003 in the Federal District Court of Minnesota. On October 15, 1980, the State and City were granted leave to intervene. Subsequently, EPA sent Superfund notice letters to Reilly Tar and both the Federal government and State amended the complaint to add Superfund claims in addition to the RCRA claim. On January 15, 1982, Judge Magnuson heard arguments on motions to dismiss the RCRA and Superfund claims. On August 20, 1982, the motions to dismiss were denied. Discovery in the case is proceeding. The State case (filed in 1970) is still pending but it is stayed pending resolutions of the Federal court litigation.

III. Overview:

In order to understand the scope of work which this grant will encompass, it is necessary to understand the entire framework of remedial action planned for the Reilly site. There are four goals which the state is striving for:

A) Contain and/or clean up ground water contamination and provide drinking water for St. Louis Park and Hopkins;

B) Contain, treat and/or remove the source materials and restore the site to protect public health (with restrictions on development and long term monitoring).

C) Successfully conclude litigation against Reilly to recover funds expended.

D) Effectively adminster cooperative agreements, grants and contracts and provide effective community relations.

These ~~two~~ four goals will be met by implementing ~~five~~ six remedial units (operable units):

Operable Unit 1 Abandon multi-aquifer wells

Operable Unit 2 Install gradient control well system

Operable Unit 3 Install treatment/disposal system for water from the gradient control system

Operable Unit 4 Provide drinking water for St. Louis Park and Hopkins

Operable Unit 5 Install an isolation/treatment/removal system for source materials

Operable Unit 6 Program management and community relations

Work has already been done on some of these tasks, and some work is currently underway. The attached Table I shows all the tasks which will ultimately need to be done, their funding source, status, and projected completion date. A timeline further illustrating the projected progress is shown in Section XI.

Examples of work already in progress or completed are as follows:

TABLE I

Goal	Operable Unit	Tasks	Funding	Status	Projected Completion Date
A. Contain and clean up ground water contamination and provide drinking water for St. Louis Park (SLP) and Hopkins (Hop)	1. Abandon multi-aquifer wells	a) Well 23 (old Reilly well)	RCRA reprogram	in progress	9/82
		b) Well 105 (sugar beet well)	RCRA reprogram	*	9/82
		c) Well Survey	RCRA reprogram	in progress	9/82
		d) Feasibility study to provide alternative sources of water for abandoned wells	this CA	this CA	1/83
		e) Top 10 priority wells abandoned	this CA	this CA	7/83

*Will be completed under RCRA reprogram monies if sufficient funds are available after completing Well 23, well survey and water treatment study. If funds are not available, Well 105 will be completed under this Cooperative Agreement.

TABLE I
(cont.)

Goal	Operable Unit	Tasks	Funding	Status	Projected Date
A. Continued		f) Cost effective analysis of well abandonment program and report	this CA	this CA	7/83
		g) Abandonment of other wells	this CA	this CA	11/83
	2. Install gradient control system	a) Facility planning (Hickok '81)	MN	finished	11/81
		b) Review by USGS	EPA MOU	in progress	7/82
		c) Data compilation for testing gradient control well system	this CA	this CA	1/83
		d) Modeling and testing of gradient control well system	this CA	this CA	1/83
		e) Evaluation and report of cost effectiveness of gradient control well system	this CA	this CA	6/83
		f) Plans and Specs	--	(future)	3/84
		g) Construction	--	(future)	11/84

TABLE I
(cont.)

Goal	O erable Unit	Tasks	Fundin	Status	Projected Completio Date
A. Continued	3. Treat/dispose water from SLP15 and other gradient control wells	a) Evaluation and report of various water treatment and disposal alternatives (study by CH_2M Hill)	RCRA reprogram	in progress	7/83
		b) Plans and Specs	--	(future)	1/84
		c) Construction	--	(future)	4/84
	4. Provide drinking water for SLP and Hop	a) SLP interconnects with Plymouth	SLP	in progress	3/82
		b) SLP drills new Hinkley well #17	SLP	in progress	6/83
		c) SLP negotiates interconnections with Minnetonka and Mpls.	SLP	in progress	--
		d) Facility planning (water treatment study) (same as task 3.a.)	RCRA reprogram	in progress	7/83
		e) Plans and Specs	--	(future)	3/84
		f) Construction	--	(future)	11/84

TABLE I
(cont.)

Goal	Operable Unit	Tasks	Funding	Status	Projected Completion Date
B. Contain, treat and/or remove the source materials and restore the site to protect public health.	5. Treat/contain/ remove source material.	a) Compile soil logs and analyze existing cores	this CA	this CA	9/83
		b) Conduct borings to define site contamination	EPA enforce-ment	in progress	10/8
		c) Evaluation and report on alternatives for contain-ment, treat-ment or removal of source materials	this CA	this CA	9/83
		d) Plans and Specs	--	(future)	4/84
		e) Construc-tion	--	(future)	11/8
C. Successfully conclude litiga-tion against Reilly to recover funds expended	(No operable units will be funded for this goal under this agreement.)				
D. Effectively adminster grants and contracts and provide effective community relations	6. Program management and community relations	a) Tasks for administration are detailed in Section X. Community relation tasks are detailed in Section IX.			

The November 1981 study by E. A. Hickok and Associates (task a, Op.Un. 2) presented a comprehensive outline for a gradient control well system to prevent further spread of contaminants, which are moving with the ground water to the south and east. Because many of the gradient control wells will be the closed city wells, a study to develop techniques and costs to treat water removed from the gradient control wells for drinking water will be starting this summer (task a, Op.Un. 3). This study, costing approximately $200,000 and financed by an amendment to an existing grant from the EPA, will also look at discharging the gradient control well water to surface waters and to the Metropolitan Waste Control Commission (MWCC) Pig's Eye Plant, while providing additional water supplies for the city from new or deeper wells, or through inter-connections with other cities. This study will take until at least July of 1983 to complete.

Another task being taken to limit contamination of ground water is the reconstruction or abandoning of multi-aquifer wells. Such wells act as conduits, allowing contaminated water from the upper drift to flow into the deeper aquifers (see Figure 3). A $200,000 contract, Tasks a, b, and c, Op.Un. 1, (under an existing U.S. EPA grant), has recently been let to reconstruct or permanently close two very deep (more than 900 feet) multi-aquifer wells near the site, and to survey the area to identify and locate other such wells.

Finally, the city of St. Louis Park has begun drilling a new well into a deeper aquifer (task b, Op.Un. 3), is in the process of interconnecting with the city of Plymouth, and is exploring the possibility of interconnections with the cities of Minnetonka and Minneapolis.

Under this Cooperative Agreement, five tasks will be completed:

Task #	Description	Amount
Task 1.d.	Abandon the top nine priority multi-aquifer wells and as many as 20-30 lower priority wells.	$900,000
Task 2.c.	Compile existing ground water analyses data.	25,000
Task 2.d.	Model and test the proposed Hickok gradient control system.	250,000
Task 5.a.	Compile existing soil logs and analyze existing cores.	496,000
Task 5.c.	Complete facility planning for source materials.	450,000
Task 6.a.	Program management and community relations.	322,287
	TOTAL	1,993,287

The scope of work for each of these tasks is discussed in the following sections. It is anticipated that all these tasks will be completed by the fall of 1983, so that plans and specifications can be completed during the first quarter of 1984, and construction begin during the 1984 construction season (roughly May through October). In all operable units, literature will be reviewed to determine the effects of "no-action" on the other operable units. Because the operable units are so inter-related, "no-action" in one unit will have profound design implications on the other units.

*Includes personnel for project management and fringe and indirect costs for all personnel.

IV. Task 1.d. Well Abandonment

The purpose of this task is to abandon nine high priority multi-aquifer wells, drill eight production wells, and pave the way for possible abandonment or reconstruction of 20-30 additional multi-aquifer wells.

Multi-aquifer wells are any wells that hydraulically connect more than one aquifer. The hydraulic connection may be due to any of the following: original open hole construction through two or more aquifers (uncased construction); leaks in the casing; and flow in the annular space between the casing and bore hole (ungrouted casing). Ground water enters an uncased or ungrouted well and moves down the well bore and into a lower aquifer in response to the difference in head or pressure between the aquifers. By this mechanism, uncased or ungrouted wells provide avenues for the transportation of contaminants between aquifers. The impact of the multi-aquifer well on contaminant transport depends on the rate of flow down the well bore and the contaminant concentration of the ground water entering the well. The rate of flow down the well depends on the thickness and hydraulic conductivity of the aquifers, the head difference between them, and the well construction and condition.

The nine wells identified here are high priority wells because of their proximity to the Reilly Tar site, large diameter construction, and the importance of the aquifers penetrated (see Table 2). These wells have the potential to transmit large masses of contaminants. Six of the wells provide pathways for contaminants to enter the Prairie du Chien-Jordan aquifer, the source for all the closed municipal wells.

Multi-aquifer wells have been shown to be a principal mechanism for the spread of contaminants in the Prairie du Chien-Jordan aquifer. The Prairie du Chien-Jordan aquifer is the most important aquifer for municipal water supply in the Twin Cities metropolitan area and therefore the need for its protection cannot be overstated.

Four of the nine wells are providing contaminant flow to the St. Peter sandstone, which is also used for municipal water supply. Furthermore, once contaminants reach the St. Peter sandstone, they can move to other multi-aquifer wells and enter lower aquifers, such as the Prairie du Chien-Jordan. Therefore, these multi-aquifer wells are very important and should also be abandoned.

Eight of the nine wells are currently used for production purposes. Therefore, it is necessary that a single aquifer well of equal production be drilled for each business and brought on line prior to abandoning the multi-aquifer well. The state will prepare a study identifying and evaluating the cost-effective alternatives for replacing process water (e.g., drilling shallower wells). However, it may be that certain of these wells would form a portion of the gradient control system, and it may be advantageous to use these wells for that purpose, as well as supplying process water.

The cost for abandoning the nine high priority wells and drilling eight production wells is estimated at $400,000.

As part of the existing RCRA cooperative agreement, the State will identify additional wells for possible abandonment. A well survey is being conducted and should be completed by September, 1982. Using the data generated by this survey, the State will evaluate the cost effectiveness of additional well abandonment as compared to the overall effectiveness of treatment, containment or removal of the source material and the gradient control well system. The study will be submitted to the U.S. EPA prior to undertaking abandonment of additional, lower priority wells.

Costs for abandoning or reconstructing 20-30 additional wells is estimated to be $500,000, for a total of $900,00 for this task. The State will not incur any costs for well abandonment beyond the initial nine wells and the cost effectiveness analysis until the Assistant Administrator for Solid Waste and Emergency Response approves additional well abandonment and the U.S. EPA Project Officer authorizes the State to do so.

TABLE 2

Group One High Priority Wells

Name	USGS No.	Well Construction	Aquifers Affected #	Recommended Action
Flame	W29	10"x8"x335'	Opl-Osp	abandon, drill new well
Burdick Grain	W35	4"	Ospl-Opc	abandon, drill new well
Hartmann #1	W41	2"x160'	Opl-Osp	abandon
Kings Inn	W44	8"x259'	Opl-Ospl	abandon, drill new well
S&K 1	W45	8"x6"x312'	Ospl-Opc	abandon, drill new well
S&K 2	W46	6"x312'	Ospl-Opc	abandon, drill new well
MN Rubber	W40	8"x318'	Ospl-Opc	abandon, drill new well
McCourtney	W62	12"x10"x394'	Ospl-Opc	abandon, drill new well
Professional Instr.	W76	6"x184'	Opl-Osp	abandon, drill new well

estimated cost: $400,000

#Opl = Platteville Limestone
Osp = St. Peter Sandstone
Ospl = St. Peter Sandstone, lower siltstone beds
Opc = Prairie du Chien Group
Oej = Jordan Sandstone

V. Task 2.c. Compile Existing Ground Water Analysis Data

The purpose of this task is to collect and compile all of the existing analyses of ground water on a computer system to facilitate data manipulation and modeling. At the present time, all the ground water analyses consist of several piles of tabulations, which are only marginally organized.

Using existing data storage and retrieval systems (such as WATSTORE or STORET), data will be collected and entered into the system. Once organized these data will be used to provide valuable information for the computer simulation of the gradient control well system (task 2.d.) and as input to the investigation of source contamination (task 5.c.). These data will actually be used to better define boundary conditions and validate results from the computer simulation. Without this data compilation, additional water quality analyses will be needed to verify the model. This task will also coordinate with an ongoing effort, funded by U.S. EPA enforcement, to determine Quality Assurance/Quality Control (QA/QC) for present and past laboratories performing the analyses.

It is estimated that the cost of this task will be $25,000. This includes the following:

Data Processor	(¼ time)	$5,400
Hydrologist	(¼ time)	$7,100
Secretary (data entry)	(¼ time)	$3,400
Contractor for computer time		$9,100
		$25,000

VI. Task 2.d. Model and Test Proposed Gradient Control System

The purpose of this task is to model and test the proposed gradient control system as developed in the 1981 Hickok report (Task a., Op.Un. 2). That system was developed using quite simplistic mathematical calculations and assumptions. Since that time, more sophisticated computer models have been developed by the USGS, which are more sensitive to changes or stresses imposed on the system.

Using these existing computer models (which includes both hydrogeologic and transport considerations), the effect of the proposed gradient control system will be tested to determine its effectiveness in various aquifers, but primarily in the Prairie du Chien-Jordan, which serves all of the closed municipal wells. Based on preliminary runs, the gradient control system (and the model) will be modified to refine the system, and to more precisely define the number and location of new and existing wells which will make up the system. Once the system and the model have been refined, short-term field testing (on the order of two to four weeks) will be conducted using existing wells (closed municipal wells, monitoring wells, and existing private wells). Results from these tests will be used to further refine the model, and pave the way for the final design. This information will be combined with the results of the ongoing water treatment feasibility study (Task a., Op.Un. 3) to determine the overall cost effectiveness and environmental effects of the gradient control well system.

The primary goal of the gradient control system is to restrict migration of contaminants to other wells, especially municipal wells in the neighboring communities of Hopkins and Edina. It may also be that operation of a gradient control system will result in restricting migration of contaminants to existing closed wells so that such wells could be used for potable water without treatment. These might include the last wells to be closed, St. Louis Park wells 4 and 5 and Hopkins well 3. This additional effect will, of course, impact upon Op.Un. 3 and 4, and will be considered in the cost effective and environmental analyses for tasks under those operable units.

Other work under this task includes continued monitoring of water levels in the aquifers near the site. This data will be combined with several years worth of existing data, and used to refine the computer model.

It is anticipated that the cost of this task will be $250,000. Much of the field work will be contracted out, and the computer modeling may be contracted to the USGS. However, for the purposes of this application, costs will be shown for the computer modeling as being done by State staff. Costs are broken down as follows:

Hydrologist (3/4 time)	$21,400
Data Processor (1/2 time)	$10,800
Contracts for:	
Computer time	$13,000
Short-term field testing (pumping temporary piping and connections)	$105,000
Laboratory analysis (ground and and surface water monitoring)	$99,800
TOTAL	$250,000

Once existing data on contamination has been entered, a number of existing frozen soil cores will be selected and qualitatively analyzed for the presence of contamination. While many of these cores are too old to yield precise quantitative analysis, they will serve to refine the picture of contamination, and to pinpoint locations for future analytical work under task 5.b. and 5.c.

It is estimated that the cost of this task will be $46,000, broken down as follows:

Data Processor (¼ time)	$5,400
Soil Scientist (½ time)	$12,400
Computer time	$8,000
Laboratory analysis	$20,000
TOTAL	$46,000

VIII. Task 5.c. Source Materials Study

Introduction

With studies in place or underway to define a gradient control well system, to thoroughly investigate water treatment alternatives, and actions underway to identify and reconstruct or abandon multi-aquifer wells, the next logical step is to look at treating, removing or containing the main source of contamination at the site. The work proposed under this Cooperative Agreement will bring the project up to the point where a cost effective remedial action will be selected for containment, treatment or removal of contaminated source material. As some of the information generated under this task will need to be interfaced with the results of previous and current investigations (such as the gradient control system testing (task 2.d.) and water treatment/disposal study (task 3.a.), it is necessary to complete this preliminary remedial investigation on the source materials with all due speed.

Source Materials

The source materials at and near the site can be divided into four physical entities: 1) pockets or bodies of organic fluid (e.g. liquid creosote oil) in the drift and possibly in the peat layer; 2) heavily contaminated water in the drift; 3) soil particles of the drift which have adsorbed PAH compounds (and perhaps other contaminants); and 4) heavily contaminated peat deposits south of the site (see Figures 1, 2, and 3). All of the source materials are generally shallow deposits (less than 80 feet deep), and all contribute to the pollution of both deeper and downgradient aquifers by desorbing contaminants (such as PAH) into the water where they are "dissolved" and transported further. Water movement can be either ground water moving laterally or, vertically, with infiltration/percolation moving down through the peat and soil.

Each of the four entities has quite different properties, and will require quite different methods and technologies to effect their proper removal, treatment and/or confinement. Each of these entities are interrelated, and that acting upon one affects not only the status of the others, but the quality of the deeper ground water aquifers as well. In essence, all four of the entities must be acted upon nearly simultaneously and in the context of the gradient control and water treatment systems in order to be effective.

For example, the organic fluid pockets currently act as hydraulic barriers in the drift, since water cannot flow through them. If the organic fluid pockets are reduced (by pumping them out of the ground, for example) then eventually the hydraulic barriers will disappear. This will result in increased flow through the most heavily contaminated area. Because the surface area of the pockets will increase as the organic fluids are removed (the pockets do not become smaller, rather full of "holes," thus increasing surface area), the concentration of PAH and other contaminants in the drift water will eventually increase due to the relatively sudden change in equilibrium and thus the increased "dissolution" of the bound contaminants. If the barrier well and water treatment systems are not in place before the pockets are removed, an increase in aqueous concentration and extent of the contamination could result.

Or, if the heavily contaminated drift water were to be removed by pumping, it is likely that a simple pretreatment separation could result in much of the water being treated with similar methods as those now being investigated in the water treatment system. Rather than build a separate system, or haul the water off-site, it makes sense to try to use the same equipment which may be provided with the gradient control/water treatment

system. Similarly, it makes sense to size that equipment to handle the flow from the drift.

Strategies

This is not to say that removal is the only strategy being considered. Indeed, three strategies present themselves, and each will be considered for each of the four source entities. These strategies are: 1) removal of materials and disposal off-site or recovery of resources; 2) containment of materials and long term monitoring; and 3) in-situ treatment and modification. Of course, it is quite possible that combinations of these strategies will be chosen in the final design. For example, an in-situ treatment scheme could likely be coupled with a containment methodology.

Each of these strategies contains inherent advantages and disadvantages. Removal has the obvious advantage of being a more complete and final solution. It has the disadvantage of being, in all probability, the most costly, the most disruptive to the site and surrounding neighborhood, and quite time consuming to implement. It would also generate a significant waste stream to be disposed of elsewhere.

Containment and monitoring would most likely be the least expensive and least disruptive, and the quickest to construct, with little or no associated waste stream. However, it does not lessen the source material, and would likely have higher associated operation and maintenance costs. In-situ treatment would have the highest operation and maintenance cost, would generate some waste (though less than removal), and could be quite costly (both in terms of money and time) to implement. Unlike mere

containment, though, it would eventually reduce the source concentrations, but over a longer timeframe than removal.

Because little or no attention has been paid in the past on this project to containment or in-situ treatment, the focus and emphasis of this scope of work will be on those two strategies.

Accordingly, each of the two above strategies will be investigated in a five-part study: 1) literature review; 2) data collection and compilation; 3) environmental analysis, 4) bench scale testing; and 5) cost effective analysis. The removal strategies will be investigated in a much less complicated manner, detailed below.

Since the Agency will be contracting with private consultants to perform much of the work, the above five part division provides two important management tools. One, it provides natural breaks between tasks to allow the Agency to review the work to date, analyze completion or inadequacies, and to modify the work plan if necessary. This will result in savings of both time and money. (A similar plan is currently being used in managing the water treatment study.) Secondly, it also provides natural breaks for public participation. This aspect is discussed more fully in the Community Relations Section which follows the detailed scope of work.

The end product of this scope of work will be a decision making document which presents: 1) methods, strategies and techniques which are technically sound and implementable; 2) the environmental effects these techniques will have on the ground water and surrounding community; and 3) the construction and operation and maintenance costs needed to implement those techniques. This document will allow the Agency, city, other state agencies and the U.S. EPA

to choose the most appropriate, timely, and cost effective solution. This solution can then be integrated with the other portions of this complex project, and allow rapid development of plans and specifications and construction. As shown in the attached time schedule, the ultimate goal is to begin construction during the summer of 1984. Timely completion of this portion of the overall campaign will allow that goal to be met.

Details of the scope of work are outlined in the following chart, followed by a more detailed discussion. (These alternatives were preliminarily screened by U.S. EPA and its consultant, Weston Engineering.)

TABLE I

Summary of Treatment Strategies

Strategy	Source 1 OFB bodies	Source 2 drift water	Source 3 drift soils	Source 4 peat
A. Removal				
-Removal and incinerate	X			X
-Removal and off-site disposal	X	X	X	X
-Removal and soil treatment	X	X		X
-Removal and resource recovery	X	X		
-Removal and biological treatment		X		
-Removal and separation		X		
B. Containment				X
C. In-situ Treatment				
-Acclimated microbes	X	X	X	X
-Peat sorption		X		
-Leaching			X	X
D. No Action	X	X	X	X

Source 1: Organic Fluid Bodies (OFB's)

There really are only two strategies available for the OFB's: removal and in-situ treatment. Containment has been judged to be impossible. The bodies are discrete, scattered both through area and depth, and numerous. These bodies move independently of the surrounding ground water, the driving force being gravity rather than ground water flow. Containment thus becomes the "no-action" alternative. Literature, especially the 1981 Hickok and USGS reports will be reviewed to determine the effects of "no-action" on the OFB's on the ground water and gradient control/water treatment systems, both in terms of time and concentration of contaminants. A very abbreviated cost effectiveness analysis will be performed to determine what, if any, impacts "no-action" will have on these systems, and on the drift water treatment scheme described below.

If the bodies are to be removed, the fluids can go to one of four ultimate dispositions: 1) incineration, 2) disposal off-site (secure landfill); 3) soil treatment by landfarming; and 4) resource recovery. Preliminary analysis of the organic fluid shows it to be nearly identical to creosote. As such it may be useful as a raw material to other manufacturers.

A literature search will be conducted, and additional data will need to be collected. The major effort will be to physically locate the OFB's by sinking a number of shallow wells. Using the information obtained in task 5.a., computer modeling of soil boring lots, and the borings funded by U.S. EPA enforcement, task 5.b., it is intended that the number of borings can be kept to a minimum. The use of these wells will not be limited to only this study, however. These same wells could be used to remove the fluids (and the

drift water) or to provide access for in-situ treatment of both the OFB's and the drift water.

If the literature review and data collection are encouraging, bench tests will be conducted for incineration and landfarming. Environmental analysis and cost effective analyses will be conducted on all options.

An in-situ treatment scheme has been presented whereby micro-organisms (which are already present in the soil and ground water) are acclimated to the contaminants over several generations. As shown in Table 4, when combined with oxygen and additional nutrients, these micro-organisms can actually break down the PAH compounds present in the OFB's and the drift water. A literature review will be conducted on this alternative, and samples of soil and ground water will be taken to isolate and culture existing micro-organisms. Bench scale reactor tests will be performed, and environmental and cost effective analyses will also be conducted.

Source 2: Drift Ground Water

As with the OFB's there is no real containment system for the drift water. If nothing is done, the gradient control/water treatment system will be the de-facto containment system. Thus, a limited literature review, environmental and cost effective analyses will be performed to determine the effects on the gradient control/water treatment systems.

If the drift water is to be removed, there are four options for its ultimate disposition: 1) separation and treatment (here the water is separated into an organic and a water phase using conventional clarification techniques). The organic phase is sent to the OFB's treatment, and the water

sent to the water treatment/disposal system; 2) separation and disposal to the sanitary sewer system; 3) separation and resource recovery; and 4) soil treatment. As with the other options, the complete series of literature review, data collection, bench scale tests, environmental and cost effective analyses will be performed.

Two in-situ treatment options are possible. One is the acclimiated microbe process described above for the OFB's. Another is the possibility that the contaminated peat south of the site has some sorption capabilities remaining. It may be possible to pump the drift water through the peat where contaminants would be removed by sorption onto the peat particles. This would be a very low cost treatment alternative, if possible. Again, the complete series of literature review, data collection, bench scale tests, environmental and cost effective analyses will be performed.

Source 3: Contaminated Drift Soils

Unlike the other three sources, removal is probably not an economically viable alternative. Preliminary estimates put the amount of material to be removed at 2 to 10 million cubic yards. This option, however, will be costed out for comparison. Like the first two sources, containment becomes the "no-action" alternative, and will be evaluated with respect to economic and environmental affects on the gradient control/water treatment systems.

One important piece of information needs to be obtained in this regard: the sorption-desorption characteristics of the drift soils. Preliminary studies indicate that these processes occur at a different rate, and, perhaps, by different mechanisms. The resulting hysteresis and, perhaps, net sorption

onto the soil could have important effects on the duration and operation of the gradient control/water treatment systems.

A study of in-situ treatment of the soils using acclimated microbes will be carried out as part of the study on the drift water.

Source 4: Peat Deposits

The peat deposits south of the site are the most complex and least well understood source of contaminants. Accordingly, much more work needs to be done to analyze and determine its exact composition and extent. Also, many more options for isolation are possible.

Removing the peat has been discussed in earlier reports, especially Hickok, 1981, and three options for its ultimate disposition are postulated: incineration, off-site disposal (secure landfill) and landfarming. A literature search should be conducted on all three options, and a number of important pieces of information will be gathered. The first and most important is to define the extent and concentration of contaminants in the peat, to determine the amount which will need to be removed or the location of containment devices.

Secondly, the thermal content of the peat and other incineration properties need to be determined. Following data collection, bench scale tests will be performed on incineration and landfarming.

However, it may not be necessary to remove the peat in order to prevent contaminants from reaching the drift ground water. It may be possible to dewater the peat (a continuous process) and cap it to prevent infiltration of precipitation. The peat deposits appear to be underlain by a

mostly continuous layer of clay. If, in the data gathering stage, it is determined that this clay layer is in fact continuous, it may be possible to construct a series of barrier wells or trenches to restrict the movement of water through the peat. Following data collection, and preliminary design, an environmental analysis and cost effective analysis will be performed on this alternative.

Two in-situ treatment schemes are also possible. One is the acclimated micro-organism option described above. Secondly, it may be possible to leach the contaminants out of the peat using steam or solvents. Each of these alternatives will be investigated with the complete series of literature review, data collection, bench scale testing, environmental and cost effective analyses.

IX. Community Relations Plan

Introduction

One measure of the success of cleaning up the Reilly Tar and Chemical waste site in St. Louis Park will be the public's satisfaction with the end result. While few citizens would oppose the idea of cleaning up the waste site and solving the public health problem, most would resent an undertaking carried out without local consultation.

To date community relations have, with the exception of an ongoing "working group," been sporadic, corresponding with the release of various studies. At this point, the public does not have a good, overall understanding of the project. Yet, at the same time, the public seems to be impatient to begin remedial action on the problem, and will not be receptive to "just another study."

Accordingly, the technical complexity of this project is judged to be high, while the level of citizen concern is judged to be medium. The following community relations plan has been prepared according to the "Guidance on Cooperative Agreements and Contracts with States Under CERCLA," March, 1982, and "Community Relations in Superfund - A Handbook," September, 1981, both published by the U.S. EPA.

Goals

The community relations plan has two goals:

1. To inform the public regarding:
    a. Technical consideration of the problem and solutions to the problem;

b. Duties of the State and U.S. EPA;

c. Purpose, scope and limits of Superfund.

2. To learn from the public:

a. Their concerns, technical, economic, social and political;

b. Their preferences for remedial alternatives.

Clientele

The "public" who are concerned with this project is anticipated to consist of the following groups:

1. Citizens living on or near the site;

2. Citizens using drinking water from the cities of St. Louis Park and Hopkins;

3. Officials of St. Louis Park and Hopkins, both city staff and elected officials;

4. Civic groups (such as League of Women Voters);

5. Environmental groups (the Izaak Walton League has expressed an interest);

6. State legislators;

7. Minnesota congressional delegation.

Work Scope

In order to effectively reach the anticipated clientele and to meet the two goals, it is proposed that a community relations coordinator be hired to carry out a number of tasks described below. In general, this coordinator would respond to requests and anticipate activities in each of the six elements described: working group, advisory committee, newsletter, public meetings, fact sheets, and press releases. Additionally, the coordinator would actively

seek out opinions and concerns from the community, so that future technical, administrative and legal tasks can better anticipate these opinions and concerns. In short, the coordinator's activities extend beyond the elements described below, to provide necessary flexibility to the program.

In addition, a final community relations plan will be submitted to the Project Officer for U.S. EPA approval prior to initiation of any field activities at the site. The plan will be consistent with the current Superfund community relations policies dated November 18, 1981 and March 31, 1982. The State will also insure that public input will be sought at the end of the feasibility study and prior to final selection of remedy. The community relations plan will specifically address how the State will consult with and solicit comments from the public on the draft feasibility study.

As part of the coordinator's general duties, there will be six elements of specific tasks. These are:

1. Working group meetings. The working group is an existing, regularly meeting group (every six weeks or so), consisting of representatives of the MPCA, MDH, DNR, USGS (St. Paul office), and cities of St. Louis Park and Hopkins. (The Minnesota Attorney General's office, U.S. EPA, and city of Edina also participate from time to time.) It is anticipated that this group will continue to meet at about the same frequency, and will continue to share information and concerns, as has been their wont.

2. Advisory committee. To ensure public understanding of - and public support for - the clean up program, the MPCA believes that a citizen's advisory council is needed. Through meetings, monthly newsletters, and

regular news releases this group would be kept abreast of both the MPCA's immediate and long range goals and how these objectives were progressing. An active, informed group will help the MPCA's efforts to consider public concerns and viewpoints when making decisions, in addition to providing the community itself with a reliable source of direct information. Meetings of the advisory committee and working group may be combined at various stages of the remedial actions, to eliminate duplication. The advisory committee will meet approximately once every eight weeks, with meetings to correspond to completion of major technical tasks.

3. Newsletter. Newsletter will be sent to the advisory committee every month, and to the city in general every other month, using the cities' existing newsletter.

4. Public meetings. Five public meetings are planned: one each to initiate the water treatment study and the source removal study, one each for the conclusions of both these studies, and one at the conclusion of both these studies, and one at the conclusion of construction. If scheduling permits, initial and final public meetings will be combined.

Initial public meetings will include presentation of background and an overview of the situation, presentation of fact sheets, solicitation for advisory committee membership and mailing list sign up.

Final public meetings will include presentations summarizing progress to date, laying out alternatives (and their environmental and economic impacts), and receiving input from the public.

5. Fact sheets. Four fact sheets will be prepared prior to each public meeting, and a number of fact sheets will be prepared following completion of major technical tasks. Fact sheets will be used in elements 2, 3, 4, and 6.

6. Press releases. Press releases will be issued before each public meeting, following formation of the advisory committee, and following completion of major technical tasks.

7. Responsiveness summaries. Responsiveness summaries will be prepared and submitted to U.S. EPA Region V prior to the beginning of the following technical tasks: task 1.d., well abandonment, task 3.c., water treatment study, and task 5.a., source materials study. Reports will also be filed following completion of these tasks and final public meetings.

Costs

In addition to the cost of one community relations coordinator, it is anticipated that $2,500 will be needed for postage, copying, preparation of exhibits and audio visual materials.

X. Costs and Administration

The bulk of the costs for tasks under this Cooperative Agreement (as shown on page 7 of 12 of the application) will be contracted to consultants and outside contractors. Two tasks: Task 1.d. well abandonment, and Task 5.c. source materials study, account for about two-thirds of the funds requested.

A portion of the remaining technical tasks (tasks 2.c., 2.d., and 5.a.), program administration, and the community relations program will be done in-house. However, as indicated earlier, the MPCA may investigate the use of outside consultants for those portions of the technical tasks as well. It is anticipated that the costs for these tasks will be roughly the same, whether performed in-house or under contract. If contracted, the Cooperative Agreement could simply be amended to transfer funds from personnel to contracts.

In the schedule in the following section, goal D., project administration has been broken out to delineate the administration of grants and contracts. As can be seen, under this Cooperative Agreement, at least four requests for proposals (RFPs) and contracts must be negotiated and carried out to bring contractors on board. Once the contractor has started it will be necessary to track progress, both technically and administratively. This will include a total of four meetings and five reports to the U.S. EPA, 30-40 meetings with contractors, and review of up to ten voluminous, highly technical reports from contractors. Add to this the technical tasks 2.c., 2.d., and 5.a., the community relations tasks, the administrative and technical work involved in administering the existing RCRA grant (and subsequent two contracts), and other U.S. EPA funding, it seems obvious that 1½ people currently assigned to the case will not be adequate to cope with the workload.

Accordingly, the MPCA proposes to hire additional personnel under this Cooperative Agreement to perform the technical and administrative tasks outlined above. The remainder of this section shows the number and classification of positions, duties, hours, hourly rates, and total costs for staff and an explanation of costs as described in Part III, Section B, Schedule A, page 7 of 12 of the application. It should be understood that many of the duties overlap, and that staff may be working under both RCRA and CERCLA grants. The state is required to match $21,053 under the RCRA grant (see attachment B). This includes half time for a hydrologist, fringe and indirect charges. This time will be devoted to the project, and is in addition to the expenses for personnel and travel under this Cooperative Agreement. Separate and detailed records will be kept to delineate time and travel for that hydrologist.

A. Personnel

Position	Duties and Task	Hours	Hourly Rate	Cost
Senior Engineer	Administer: all tasks Technical: none Community Relations	2088 (1.0 yr)	13.78	$28,773
Hydrologist	Administer: tasks 1.(all), 2.d., 4.b., 5.a.,b.,c. Technical: none Historical Resource Community Relations	1044 (0.5 yr)	12.31	12,852
Hydrologist	Administer: none Technical: tasks 2.c., 2.d., 5.a., 5.c. Community Relations	2088 (1.0 yr)	13.69	28,585
Graduate Engineer	Administer: tasks 5.b., 5.c Technical: none	1044 (0.5 yr)	11.95	12,476

Position	Duties and Task	Hours	Hourly Rate	Cost
Soil Scientist	Administer: task 5.a.,b.,c.(½) Technical: task 5.a.,b.,c. (½) Community Relations	2088 (1.0 yr)	11.87	24,785
Data Processor	Administer: none Technical: task 2.c., 2.d., 5.a. Community Relations	2088 (1.0 yr)	10.33	21,569
Community Relations Coordinator	Administer: none Technical: none Community Relations	2088 (1.0 yr)	9.33	19,481
Secretary	--	3137 (1.5 yr)	6.53	20,485
First Line Supervisor	Supervises Senior Engineer and Community Relations Coordinator	210 (0.1 yr)	15.40	3,230
First Line Supervisor	Supervises other staff	210 (0.1 yr)	13.93	2,925
	SUB-TOTAL			175,161

B. Fringe Benefits:

18 percent of salary

SUB-TOTAL 31,529

C. Travel:

In-State - Travel for inspections, meetings, and community relations

10,000 miles at $0.29/mile motor pool cost	$2,900

Out-State - Travel and subsistence for four trips for two people to U.S. EPA Chicago to coordinate grants and contracts

4 trips times 2 persons times $350/person	2,800

Travel and subsistence for two trips for two people to U.S. EPA Washington to coordinate grants and contracts

2 trips times 2 person times $500/person	2,000
SUB-TOTAL	$7,700

D. Equipment

Major Acquisitions

Word processing work station*	10,000
Sampler/Concentrator for existing GC/MS for MDH**	8,500
Gas chromatograph for performing volatile organics analysis by MDH	30,000
SUB-TOTAL	$48,500

* Because 1½ years of secretarial time is needed solely to administer this Cooperative Agreement and subsequent contracts, a video display terminal, which could be connected to existing processing and printing equipment, is needed to effectively use secretarial skills and time.

**Nearly all analytical work will be contracted out to private laboratories. However, in order to check on the QA/QC of contract labs, the MDH lab needs this equipment to provide efficient turnaround of samples. MDH labs QA/QC is currently being assessed and certified by U.S. EPA Environmental Monitoring and Support Laboratory (EMSL) in Cincinnatti. EMSL and Region V QA/QC will also be requested to provide up-front assessment of contract labs (as they have, for example, for CH_2M Hill's lab, task 3.a.).

E. Supplies

Routine office supplies $275/staff times 7.5 staff	2,062
Other:	
Communications	
Postage $360/staff times 7.5 staff	2,700
Telephone $340/staff times 7.5 staff	2,550
Printing and binding	
Community relations (see Section XI)	2,500
Advertising for community meetings	500
Repair service agreements, other purchased services, freight and express	2,000
SUB-TOTAL	12,312

F. Contractural

Computer Time	
Contract(s) with STORET and/or State Information Services Bureau, Department of Administration, University of Minnesota, and/or private contractor (see Section V, VI, and VII)	30,100
Field Test Gradient Control System (field work - see Section VI	105,000
Well Abandonment (see Section IV)	900,000
Source Materials Study (see Section VIII)	450,000
Laboratory Analysis - (see Sections VI and VII)	120,000

F. Contractural (continued)

Laboratory Calibration* Contract with equipment supplier to adjust GC/MS, set up data base and assist in QC refinement for Minnesota Department of Health		7,500
SUBTOTAL		1,616,600

G. Construction

none

H. Other

none

I. Total Direct Charges		1,891,102
J. Indirect Charges		
49.1 percent of Personnel and Fringe Benefits	(206,690)	101,485
K. TOTAL		1,993,287

*See footnote, page 39.

XI. Schedule

The attached schedule summarizes not only the tasks to be accomplished under this Cooperative Agreement, but tries to show the entire scope and schedule for the Reilly Tar and Chemical/St. Louis Park project.

/O erative Units	II 1982	III 1982	IV 1982	I 1983	II 1983	III 1983	IV 1983	I 1984	II 1984	III 1984	IV 1984	Total
ntain ground contamination; up ground contamination; ide drinking for ouis Park, ins												
. Abandon multi-quifer wells		task a, c done	task d done		task b, e, f done		task g done					
. Gradient ntrol stem		task b done		task c, d done		task e done					task g done	
. Water eatment/ isposal stem		task a starts	bench test done		pilot test done	task a done			task f done		task g done	
. Provide inking ter for . Louis Park d Hopkins		task a done			task b done	task d done			task e done		task f done	
ntain, treat r remove e materials estore the to protect c health												
Source terials udy		task a, b done	task c	bench test done		pilot test done	task c done		task d done		task e done	

I/O erative Units	uar er II 1982	uar er III 1982	uarter IV 1982	Quarter I 1983	Quarter II 1983	Quarter III 1983	Quarter IV 1983	Quarter I 1984	Quarter II 1984	Quarter III 1984	Quarter IV 1984	Total
uccessfully lude litigation inst Reilly Tar ecover funds nded					___		(lawsuit	pending)				
dminister ts and racts												
. $400,000 RCRA rant	amend rant		meet re ort	re ort	meet amend grant	final report						2 mee 4 re ts
a. $200,000 well abandon and survey	start	6 meets	done									12 meets 4 reports
b. $200,000 water treat- ment study	RFP/ contrac	start	3 meets 2 r ts	3 meets	3 meets report	3 meets final report						
. CERCLA ooperative greement		submit and si n CA	meet re ort	meet re ort	meet report	meet report	final report					4 meets 5 reports
a. Well abandonment		RFP/ contrac			6 meets	6 meets	2 meets done					14 meets
b. Source study		RFP/ contrac	3 meets re ort	3 meets re ort	3 meets	3 meets report	3 meets final report					15 meets 4 reports
c. Other tasks		RFP/ contrac	3 meets re ort	3 meets report	3 meets							9 meets 2 reports
ther EPA ing							submit and sign CA	report	meet report	report	report final	2 meets 4 reports
uture CA												

erative Units	Quarter II 1982	Quarter III 1982	Quarter IV 1982	Quarter I 1983	Quarter II 1983	Quarter III 1983	Quarter IV 1983	Quarter I 1984	Quarter II 1984	Quarter III 1984	Quarter IV 1984	Total
ntain ity relations												
Working group tings	2	2	1	3	2	2	2	2	2	3	2	22
Advisory ittee tings		2	1	2	2	2	2	2	2	2	2	19
Public tings			1	1		1	1				1	5
Newsletters		3	3	3	3	3	3	3	3	3	3	30
Newsreleases		2	1	2	2	2	2	2	2	2	2	19
Fact sheets		4	1	2	1	4	1	1	1	4	-	19

XII. Assurances

The state of Minnesota hereby makes the following 23 assurances to the U.S. EPA. Assurance No 1 relates to the requirement that the State pay 10 percent of the cost of remedial actions. Assurance No. 2 relates to the requirement that the state assure future operation and maintenance. Assurance No. 3 relates to the requirement that the state provide a hazardous waste disposal facility. Assurances 4 through 23 relate to miscellaneous administrative requirements spelled out in U.S. EPA Guidance on Cooperative Agreements With States Under CERCLA, dated March, 1982, by William N. Hedeman, Jr.

1. The state of Minnesota (hereinafter "the State") acknowledges that CERCLA Sections 104(c)(3)(C) and 104(d)(1) require that the State pay or assure payment of 10 percent of the costs of the remedial actions to be undertaken pursuant to this Cooperative Agreement. CERCLA Section 104(c)(3)(C) provides that U.S. EPA will grant the State a credit against the share of the costs for which it is responsible under this section for any documented out-of-pocket, non-federal funds expended or obligated by the State or a political subdivision thereof between January 1, 1978 and December 11, 1980 for cost eligible response actions. The State hereby claims such a credit (see Attachment B).

Further, the State has set in motion a process for ensuring additional funds. In 1982, a bill, entitled "The Environmental Response and Liability Act" was submitted to the legislature. The bill was similar to CERCLA, and made funds available to the MPCA for the purpose of removing or remedying releases or threatened releases of hazardous substances. That bill was passed by both houses of the legislature, but was vetoed by the governor. This bill will be resubmitted to the next session of the legislature.

The State shall provide a verified accounting of its expenditures to the U.S. EPA Project Officer who will transfer the accounting to the U.S. EPA Inspector General and coordinate the Inspector General's determination of the State's credit. At U.S. EPA's request the State shall make available for audit the documentation supporting the accounting. U.S. EPA shall notify the State of the total amount which will be allowed as a credit toward the State's cost share. If the total amount allowed as State credit is less than 10 percent of the estimated costs of the remedial actions described in this application, within 60 days notification the State shall demonstrate its capability to provide the additional amount necessary to meet its statutory cost share.

2. Pursuant to CERCLA 104(c)(3)(A), the State agrees to assure all future operation and maintenance of the removal and remedial actions under this Cooperative Agreement provided for the expected life of such actions as determined by the U.S. EPA. Pursuant to CERCLA 104(c)(3)(C), the State agrees to try, in good faith, to obtain funds in order to "pay or assure payment of 10 percent of the costs of the remedial action, including all future maintenance." The "Environmental Response and Liability Act," described above in 1 above, would, if put into effect, provide the mechanism for those funds. As the scope of work under this Cooperative Agreement will not produce activities or products requiring operation and maintenance, the State feels it need not make any more detailed assurances concerning operation and maintenance at this time. When construction funds are advanced under future Cooperative Agreements, the State will make further assurances at that time. The State shall, prior to completion of the tasks set forth in this application and subsequent

Cooperative Agreement identify the State agency that will be responsible for operation and maintenance and provide a statement, acceptable to the U.S. EPA, describing how the State will finance such operation and maintenance costs.

3. Pursuant to CERCLA Section 104(c)(3)(3), requiring the availability of a hazardous waste disposal facility, the State makes the following assurances:

A. That for all hazardous waste removed during the investigative and evaluative portions of the proposed removal and remedial actions, a facility which has adequate capacity and is able to receive the hazardous waste identified and specified for off-site storage, treatment, and disposal, will be available for those hazardous wastes. It is anticipated that the quantities of waste generated under the scope of work for this grant will be quite small. The State may use facilities located in other states. Such facility will be acceptable to the U.S. EPA, and at a minimum, comply with requirements of Subtitle C of the Resource Conservation and Recovery Act (RCRA) for any necessary off-site storage, destruction, treatment or secure disposition of the hazardous substances at the site.

B. That the State is currently in the process of siting a hazardous waste disposal facility within the State. Minnesota Statutes 115A requires that such a facility be sited, according to the following schedule:

Date	Action	Status
August 1, 1982	Waste Management Board (WMB) shall select six candidate sites	In progress
January 1, 1983	WMB shall select for further study, design and operating specifications for a variety of disposal facilities for hazardous wastes	In progress
May 1, 1983	WMB shall issue certificate(s) of need for a disposal facility or facilities for hazardous wastes in the State	In progress
Within 120 days following assurance of certificate(s) of need*	An environmental impact statement (EIS) shall be comppleted by the MPCA on disposal facilities at each candidate site	--
Within 60 days following acceptance of of the final EIS*	Each permitting state agency shall issue a notice of intent to issue permits	--
Within 60 days following final agency decision on permits	WMB shall select a site or sites for facilities	--

*Note: Because of mandated public participation requirements, and the unknown length of such public participation, assignment of exact dates is not possible.

Minnesota Statute 115A.57 further requires the Commissioner of Finance to maintain a Minnesota State Waste Management Fund for the purpose of acquiring a hazardous waste disposal and treatment site, and authorizes the Commissioner to sell bonds for maintaining the fund.

4. The State assures that activities conducted under this application will be consistent with CERCLA (PL 96-510) and the final National Contingency Plan (NCP) (as published in the July 16, 1982 Federal Register, 47 Fed. Reg. No. 137, page 31180.

5. Nothing contained in this Cooperative Agreement shall be construed to create, either expressly or by implication, the relationship of agency between U.S. EPA and the State. Any standards, procedures or protocols prescribed in this Cooperative Agreement to be followed by the State or its contractors during the performance of its obligations under this Cooperative Agreement are for assurance of the quality of the final product of the actions contemplated by this Cooperative Agreement, and do not constitute a right to control the actions of the State. U.S. EPA (including its employees and contractors) is not authorized to represent or act on behalf of the State in any matter relating to the subject matter of this Cooperative Agreement. Neither U.S. EPA nor the State shall be liable for the contracts, acts, errors or omissions of the agents, employees or contractors of the other party entered into, committed or performed with respect to or in the performance of this Cooperative Agreement.

6. The State assures that safety plans prepared for activities performed pursuant to any Cooperative Agreement subsequent to this application shall be consistent with the requirements of CERCLA Section 104(f), U.S. EPA's Occupational Health and Safety Manual and other applicable U.S. EPA safety guidance. In awarding contracts to any person engaged in response actions, the

State shall require compliance with federal health and safety standards by contractors and subcontractors as a condition of such contracts.

7. The State assures that as required by CERCLA 104(g)(1), in awarding contracts to any contractor, the State shall require compliance with the Davis-Bacon Act as a condition of such contracts.

8. The State assures that it will comply with 40 CFR 33, concerning affirmative steps to effectively utilize small, minority and women's businesses as sources of supplies and services whenever practicable and consistent with the Statement of Work for this Cooperative Agreement.

9. In order to support U.S. EPA's actions to recover the costs incurred and amounts expended under any Cooperative Agreement, the State assures that it will adequately record and document the costs and expenditures incurred in undertaking the activities described in this Agreement in a manner acceptable to U.S. EPA and the State. The State shall also follow procedures acceptable to U.S. EPA to assure the legal chain-of-custody for the samples and materials taken from the site and shall provide a written description of those procedures within 30 days of acceptance of the award. The State shall also ensure the availability of its records and current employees and to the extent possible its past employees at the time of litigation, for use in federal cost recovery litigation or other litigation to compel responsible parties to take necessary actions at the site.

10. The State shall assure that quality assurance procedures acceptable to U.S. EPA are adhered to throughout all activities.

11. The State assures that it will submit quarterly progress reports to the U.S. EPA Project Officer. These reports shall cover expenditures to date and expenditures since the previous report; estimates of work completed (as a percentage of the total work to be done on that activity), with a description of the basis for the estimates; estimated variance (cost and time) expected at project completion, based on current project status; as well as an itemization of expenditures by cost category. In addition, the State will require its contractor to submit monthly progress reports and submit copies of said reports to the U.S. EPA Project Officer.

12. The State assures that all federal, state and local permits necessary for implementing the activities addressed in this Cooperative Agreement will be obtained.

13. The State assures that it will provide access to the site, as well as all right-of-way and easements necessary to satisfactorily complete the planned response actions, subject to the limited right of access granted by State Statutes.

14. The State assures that it will use cost principles of Office of Management and Budget Circular A-87 as applicable to this award.

15. The State agrees to the following conditions in accepting any Assistance Agreement for the letter of credit method of financing:

(a) Cash drawdown will occur only when needed for its disbursements;

(b) Provide timely reporting of cash disbursements and balances as required by the U.S. EPA Letter of Credit Users Manual;

(c) Impose the same standards of timing and reporting on secondary recipients, if any.

Failure on the part of the recipient to comply with the above conditions may cause the unobligated portions of the letter of credit to be revoked and the financing method changed to a reimbursable basis.

16. The State acknowledges and agrees to the following:

(a) The authorized budget includes indirect costs in the amount of 49.1 percent.

(b) This will not constitute an allowable cost until an acceptable indirect cost rate is established. When and if an indirect cost rate is established, such cost will be allowable effective with the approved period covered in the indirect cost negotiated agreement. If the rate negotiated is lower than the rate cited in this agreement, U.S. EPA will adjust the indirect costs downward. The recipient must initiate negotiations for the establishment of an indirect cost rate with U.S. EPA or another federal agency within 30 days from acceptance of the Assistance Agreement.

17. The State assures that it will adhere to the procurement standards of 40 CFR 33 (47 Federal Register 20474, May 12, 1982).

18. The State assures that it will submit a final report in accordance with 40 CFR 30.635-2 and the "Scientific and Technical Publications," 5/14/74, as revised and updated at the time of report preparation.

19. U.S. EPA and the State agree that, with respect to the claims which each may be entitled to assert against any third person (herein referred to as the "responsible party," whether one or more) for reimbursement of any services, materials, monies or other thing of value expended by U.S. EPA or the State for response activity at the site described in this Cooperative Agreement,

neither U.S. EPA nor the State will enter into a settlement with or initiate a judicial or administrative proceeding against a responsible party for the recovery of such sums except after having given notice in writing to the other party to this Cooperative Agreement not less than thirty days in advance of the date of the proposed settlement or commencement of the proposed judicial or administrative proceedings. Neither party to this Cooperative Agreement shall attempt to negotiate for nor collect reimbursement of any response costs on behalf of the other party, and authority to do so is hereby expressly negated and denied.

20. U.S. EPA and the State agree to cooperate and coordinate in efforts to recover their respective costs of response actions taken at the site described herein, including the negotiation of settlement and the filing and management of any judicial actions against potentially responsible parties. This shall include coordination in the use of evidence and witnesses available to each in the preparation and presentation of any cost recovery action, excepting any documents or information which may be confidential under the provisions of any applicable State or Federal law or regulation.

21. The State agrees to submit any other relevant documents and/or recommendations prepared under this Cooperative Agreement to the U.S. EPA Project Officer for written concurrence prior to initiation of the next activity.

22. The State assures that it will keep separate records and time cards in order to distinguish between the former RCRA and CERCLA Cooperative Agreements.

23. The State will not exceed the maximum daily rate for a GS-18 for consultant services, which is currently $222.12.

XIII. References

1. Barr Engineering (A. Gebhard), "Soil and Ground Water Investigation - Coal Tar Distillation and Wood Preserving Site, St. Louis Park, Minnesota," June, 1977.

2. Hickok, E. A. and Associates, "Study of Ground Water Contamination in St. Louis Park, Minnesota," November, 1981.

3. Hult, M. F. and M. E. Schoenberg, U.S. Geological Survey, "Preliminary Evaluation of Ground Water Contamination by Coal Tar Derivatives, St. Louis Park, Minnesota," January, 1981.

4. Sunde, G. M., "Hydrogeologic Study of the Republic Creosoting Site," July, 1974.

Attachment B

Minnesota Pollution Control Agency

May 5, 1982

Mr. Richard E. Bartelt, Chief
Remedial Response Branch
U.S. Environmental Protection Agency
5HR-TUB
111 West Jackson Boulevard
Chicago, Illinois 60604

Dear Mr. Bartelt:

In response to your letter of March 11, 1982, and in accordance with U.S. Environmental Protection Agency's (EPA) November 30, 1981 memorandum entitled, "Verification of State Expenditures during CERCLA Credit Period," the state of Minnesota formally requests a credit verification of the state's expenditures (including those by local units of government) for work conducted at the Reilly Tar and Chemical site, St. Louis Park, Minnesota. The Minnesota Pollution Control Agency (MPCA), Minnesota Department of Health (MDH) and the cities of St. Louis Park, Minnesota and Hopkins, Minnesota are in the process of compiling a summary of expenses which have been incurred in the investigation at the above named site during the designated credit period.

However, it is anticipated that this process will be quite time consuming. Therefore, in an attempt to preserve the continuity and timing of the work already underway at the site, we have conducted a cursory examination of our records. This survey (summarized on the enclosed list), showed a substantial amount of incurred documented costs which the state considers a creditable expense. Further, this amount is in excess of the required match for current and imminent cooperative agreements at this site.

Because of the high priority and extensive amount of work planned for the site this year, the state hereby requests that the audit be performed on the documented expenses which we are able to provide at this time. As additions to our credit will certainly be requested at a later date, we will be requesting an additional audit for the Reilly Tar site, St. Louis Park, Minnesota at such times as the remainder of our expenses can be documented.

Phone:_____
1935 West County Road B2, Roseville, Minnesota 55113-2785

We believe that this process will, at the same time, fulfill the requirements of the EPA and preserve the continuity and timing of the work already underway at the site. If our office can provide you with more information in this matter, please contact Mr. Michael Hansel (297-3353) of my staff.

Sincerely,

Dale L. Wikre
Director
Solid and Hazardous Waste Division

DLW/MJH:sf

Enclosure

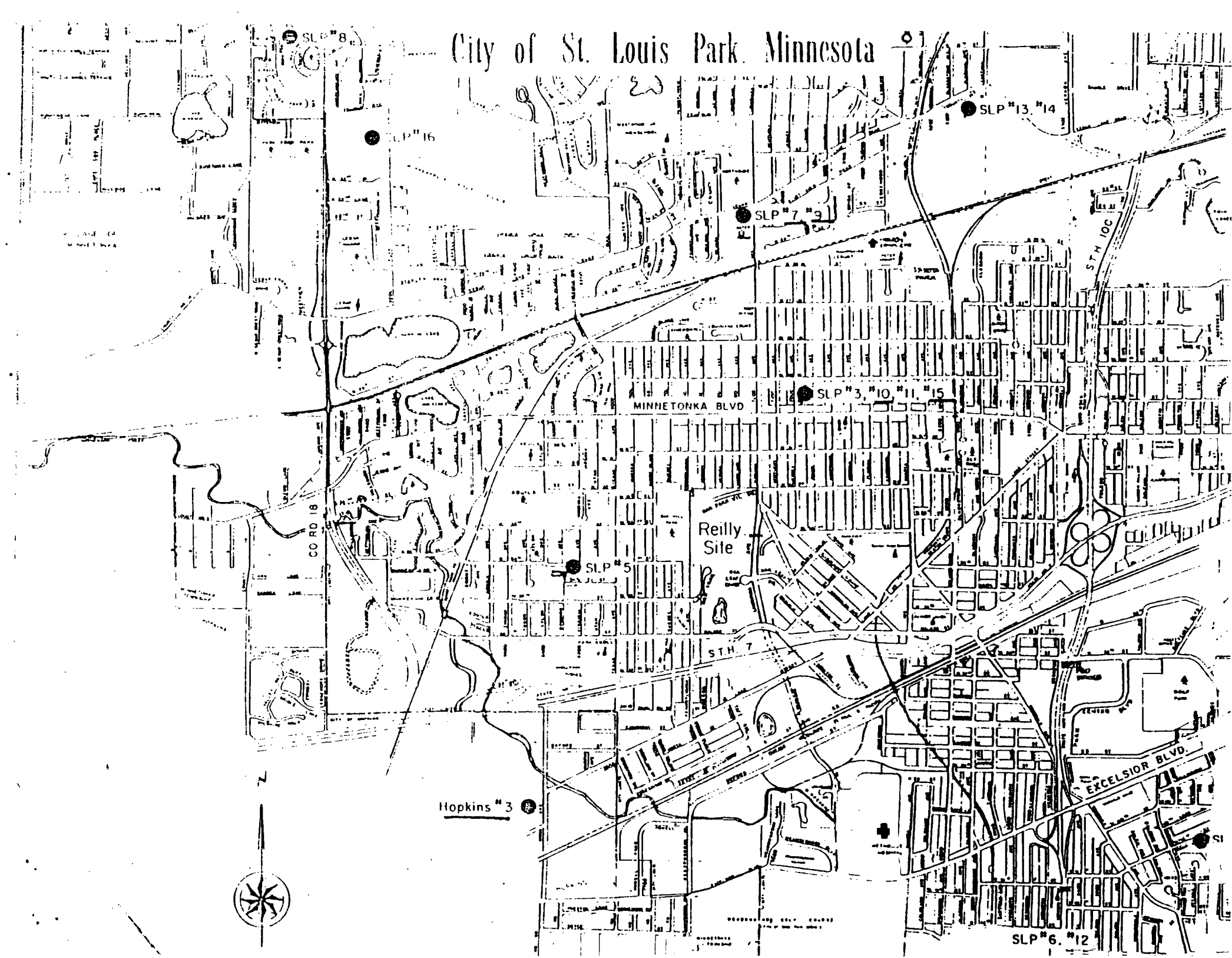
EXPENDITURES FOR WORK CONDUCTED AT THE REILLY TAR AND CHEMICAL SITE, ST. LOUIS PARK, MINNESOTA

State of Minnesota contract with:

	AMOUNT	DATE
Hickok and Associates	$120,000	7-1-80
U.S. Geological Survey	$205,000	7-1-78 to 10-1-80
Well Abandonment	$70,000	7-1-78
Well Abandonment	$30,000	9-1-80
Subtotal	$425,000	

City of St. Louis Park:

Well Closure Wells #1, 2 and 9	$10,000	1978
Rubber Packer for Well	$5,000	1980
Drinking Water Study Hickok and Associates	$25,000	1980
Powdered Activated Carbon Treatment Pilot Study Hickok and Associates	$8,000	1979
Locating Abandoned Wells on Reilly Tar Site	$5,000	1979 - 1980
Pace Laboratories, Inc., Analysis of L. A. Testing	$2,000	1978
Monitoring Well	$4,000	1978
Subtotal	$59,000	
Total	$484,000	


City of St. Louis Park, Minnesota
SLP #8
SLP #16
SLP #13, #14
SLP #7, #9
STH 100
MINNETONKA BLVD
SLP #3, #10, #11, #15
CO RD 18
Reilly Site
SLP #5
STH 7
EXCELSIOR BLVD.
Hopkins #3
SLP #6, #12

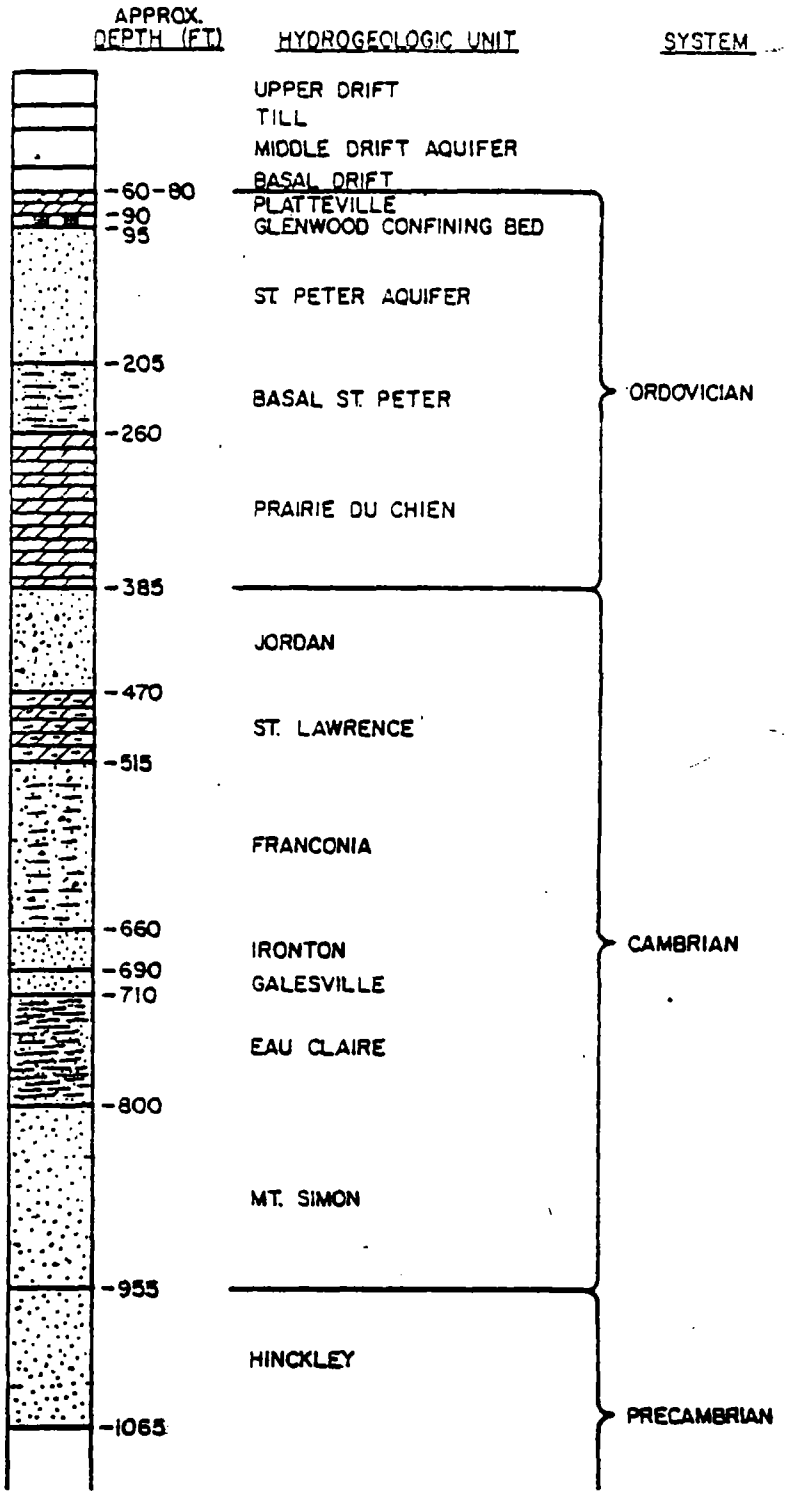


Figure No. 2

MINN. DEPT. OF HEALTH
ENERALIZED STRATIGRAPHIC SEQUENCE

E.A. HICKOK & ASSOCIATES NOV. 1981
HYDROLOGISTS-ENGINEERS

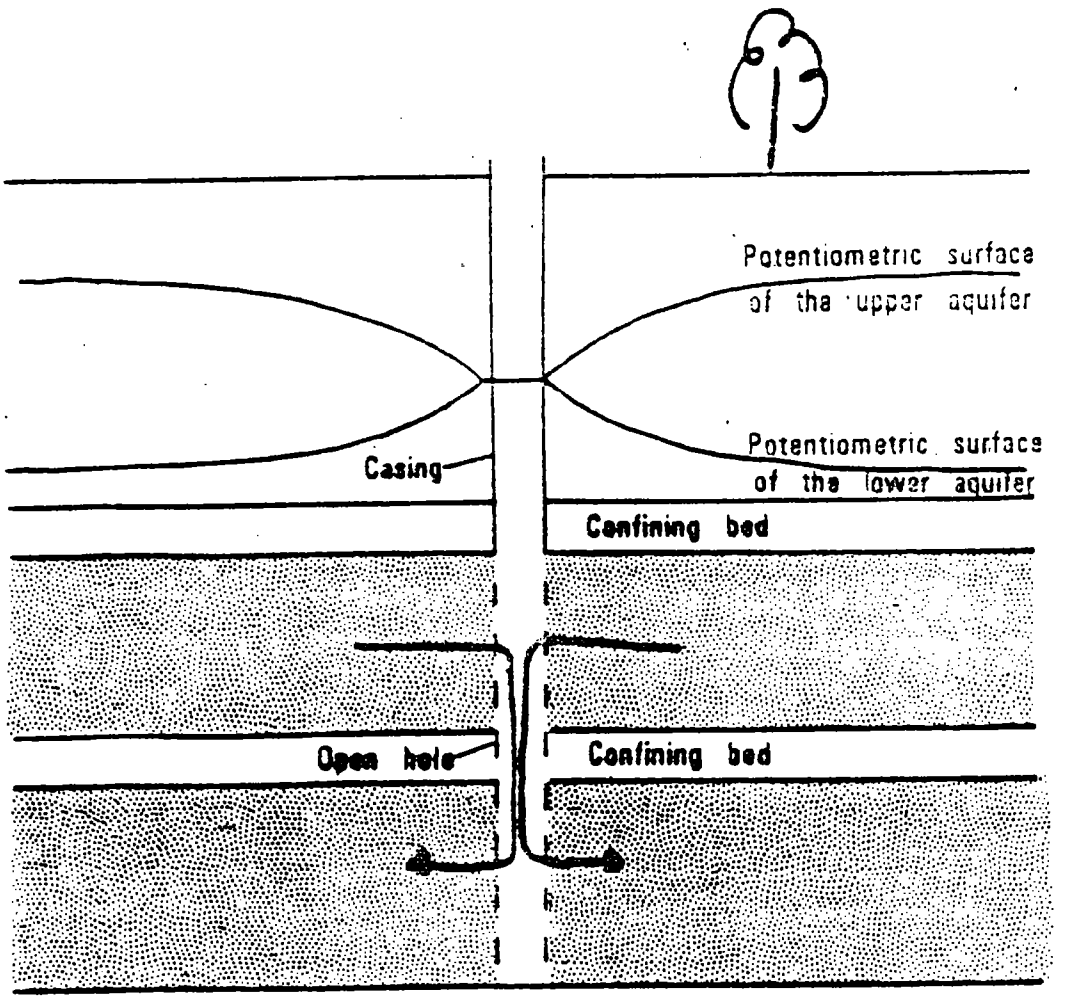


Figure 3--Schematic hydrologic section showing a well interconnecting two confined aquifers, flow through the well bore, and the effect of this flow on the potentiometric surfaces of the two aquifers

Table 4

BIODEGRADATION OF PAH'S IN UNACCLIMATED AND ACCLIMATED CULTURES[1]

Compound	PERCENT DEGRADATION	
	Original Culture	Third Subculture
Fluoranthene	0	100
Benco(a)anthracene	16	0
Chrysene	0	38
Anthracene	43	92
Pyrene	71	100

[1] Patterson, J.W., and Kodukala, P.S.; "Biodegradation of Hazardous Organic Pollutants," Chemical Engineering Progress, April 1981.

PROCUREMENT SYSTEM CHECKLIST

Form Approved
OMB No. 2000-0453
Expires 4-84

SECTION I - INSTRUCTIONS

is form must accompany each application for EPA Assistance. If the applicant has certified its procurement system to EPA within the st two years and the system has not been substantially revised, complete Part A in Section II, then sign and date the form. If the system not been certified within the past two years, complete Part B.

SECTION II - CERTIFICATION

I affirm that the applicant has within the past two years certified its procurement system to EPA as complying with 40 CFR Part 33 and that the system has not been substantially revised. The date of the applicant's latest certification is: | MONTH/YEAR 11/80

Based upon my evaluation of the applicant's procurement system, I, as authorized representative of the applicant: *(Check one of the followings:)*

☐ 1. CERTIFY that the applicant's procurement system will meet all of the requirements of 40 CFR Part 33 including the attached subparts before undertaking any procurement action with EPA assistance.

ease furnish citations to applicable State or local ordinances and regulations.

☐ 2. DO NOT CERTIFY. The applicant will follow the requirements of 40 CFR Part 33 with EPA review and prereward approval of proposed procurement actions that will use EPA assistance.

PSD NAME & TITLE OF CHIEF EXECUTIVE OFFICER	SIGNATURE	DATE
ouis J. Breimhurst Executive Director	Michael Robertson	8-18-82

elow is a list of subparts and sections of 40 CFR Part 33 which contain some but not all of the requirements for procurements unde A assistance. The purpose of this list is to assist in the evaluation of the applicant's procurement system to determine if it is certifiabl nd meets the basic procurement principles as articulated in Part 33. As such, this list highlights certain aspects of the regulations whic a recipient shall use in its evaluation process and is not intended to replace a detailed reading of Part 33.

PART 33 REFERENCE	SECTION TITLE - SUMMARY OF REQUIREMENTS
33.210	SUBAGREEMENT ADMINISTRATION - System must ensure that contractors perform in accordance with all applicable contract requirements.
33.220	LIMITATION ON RECIPIENT AWARD - System must consider listed factors in determining contractor responsibility.

33.225	PROFITS - System procedures must allow only fair and reasonable profits to contractors.
33.240	SMALL, MINORITY, WOMEN'S, AND LABOR SURPLUS AREA BUSINESSES - System must provide for use of these businesses as specified in this section.
33.250	DOCUMENTATION - System must require that procurement records and files for purchases over $10,000 include items specified in this section.
33.255	SPECIFICATIONS - System procedures for establishing specifications for products or services to be procured must meet requirements of this section.
33.265	BONDING AND INSURANCE - System procedures and requirements related to bonding and insurance must meet requirements of this section.
33.270	CODE OF CONDUCT - System must have a written code or standards of conduct meeting the requirements of this section.
33.275	FEDERAL COST PRINCIPLES - System procedures for determining allowable costs must comply with the cost principles specified in this section.
33.285	PROHIBITED TYPES OF CONTRACTS - System may not allow use of cost-plus-percentage-of cost (multiplier) or percentage-of-construction-cost types of contracts.
33.290	COST AND PRICE CONSIDERATIONS - System procedures must allow for consideration of cost and price as required in this section.
33.295	LOWER TIER SUBAGREEMENTS - System must provide that subagreements below the first tier comply with all provisions specified in this section.
33.305-310	SMALL PURCHASE - System small purchase procedures must meet requirements of these sections.
33.405-435	FORMAL ADVERTISING - System procedures related to formal advertising, including those for bidding documents and contract awards, must meet the requirements of these sections.
33.505-535	COMPETITIVE NEGOTIATION - System procedures for competitive negotiation must meet the requirements of these sections.
33.605	NONCOMPETITIVE NEGOTIATION - System procedures for noncompetitive negotiation must meet the requirement of this section.
SUBPARTS C - G	**SYSTEM MUST COMPLY WITH REQUIREMENTS IN THESE SUBPARTS:**
C	CLEAN WATER ACT REQUIREMENTS - Subpart applies to procurement under assistance agreements for construction of treatment works under the Clean Water Act.
D	REQUIREMENTS FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT ORGANIZATIONS - Subpart describes the procurement requirements for nonprofit organizations.
E	REQUIREMENTS FOR RECIPIENTS OF REMEDIAL ACTION COOPERATIVE AGREEMENTS UNDER THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 - Subpart describes the additional procurement requirements for recipients of these cooperative agreements.
F	SUBAGREEMENT PROVISIONS - Subagreements for procurement under EPA Assistance must contain the appropriate clauses, or their equivalent, specified in this subpart.

THE CLEARINGHOUSE REVIEW REPORT WILL
BE SUBMITTED AS SOON AS IT IS RECEIVED.